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AUTHOR Goldhor, Herbert
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ABSTRACT

The Index of American Public Library Circulation dates back to 1939, and the Index of American Public Library Expenditures to 1951. These indexes are based on annual reports from a sample of all American public libraries serving more than 25,000 people each. Using the 1982 American Library Directory, the researchers identified 1,586 public libraries that appeared to meet this criterion. A letter requesting data on their total circulation and total expenditures for 1975 and 1980 was sent to each of the identified libraries. Usable data was received from 1,336 libraries (84%). The four figures for each library were entered in a computer file and a list was printed of the rates of change for each series--circulation and expenditures--from high to low. Libraries in a systematic sample (every 50th library) were invited to become members of a new sample for the indexes for the 1980s and to contribute their data for 1981 circulation and expenditures. Based on this sample population, this report is divided into sections on: (1) analyses of the present study procedures; (2) new features of the indexes; (3) tests of accuracy on the U.S. indexes; (4) comparisons of the U.S. indexes with data from England and Canada; and (5) correlations between variables. Findings are detailed in 13 appendices, including tables, and references are provided. (THC)

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A Summary and Review of the Indexes of American Public Library Statistics: 1939-1983

by Herbert Goldhor

Library Research Center

Graduate School of Library and Information Science

University of Illinois at Urbana-Champaign

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Table of Contents

		Page
Sec. 1.	Analyses of the Present Procedures	1
2.	New Features	10
3.	Tests of the US Indexes	12
4.	Comparisons of the US Indexes with Data from England and Canada	30
5.	Correlations Between Variables	35
Appendix Tables 1-13		44

Sec. 1. Analyses of the Present Procedures

The Index of American Public Library Circulation goes back to 1939, and the Index of American Public Library Expenditures to 1951. In the 45 years so covered, some changes have been made in the Indexes, some data have been gathered which allow for tests of the Indexes, and some analyses have been done, the results of which should be reported. Most of these have occurred since the last previous published review of the Indexes (1). This present report will bring the story up-to-date and will include a description of the relevant procedures.

Work on the US Index of Circulation began in 1946 with a pilot study of an index of Illinois public library circulation because data for all public libraries were available as a check each year. The success of the state index led to the creation of the national index, the results of which were first published in 1949 with data going back to 1939. Both the Illinois Index and the first dozen years of the US Index included quarterly as well as annual reports. The first sample group for the US Index, with 1939=100, had 41 libraries. A new sample (of 42 libraries) was not drawn until after the 1960 census but the data were gathered from 1951 on and included expenditures as well as circulation. This sample with 1960=100 was drawn from all those public libraries serving 35,000 people or more; both the earlier and later samples were based on 25,000 population and above. After the 1970 census, a sample of 50 libraries was used, with data going back to 1961. After the 1980 census, a sample of 53 libraries was drawn and the data began with 1980.

There is a technical problem involved in linking the four series of circulation index numbers into one continuum, and also in linking the three series of expenditure index numbers as well as the various series of index numbers of the cost of living in the US, UK and Canada. The problem was handled in all cases by using the ratio between any two series in the first year of overlap to predict the value for each prior year of the earlier series from the known value of the first year of the later series; see the example given in the note to Table 1a in the appendix here. The validity of this method depends on the assumption that the ratio in the first year of overlap is essentially the same as in all the earlier years. Examination of the general trend in the original series of index numbers and in the linked series seems to support this assumption. We can also test it in those

cases of duplicate index numbers, viz., for 1951 to 1961 in the case of circulation, 1961-68 in both circulation and expenditures, and 1980-81 in both circulation and expenditures (see Table 1a). When we convert one or both series to a common base year, the average difference per year is 4.9 (5 median), 10.6 (10), 5 (5), 0 and 2 respectively. Furthermore in every case, the index number of the second series is equal to or less than the same year's index number of the first series; in other words the trend in the linked series is always the same as in the original values.

The Indexes are based upon annual reports from a sample of all American public libraries serving over 25,000 people each; it is therefore necessary to draw a new sample every ten years in the light of the results of the decennial census. Since many public libraries serve more than the population of a given city, we waited until the 1982 American Library Directory appeared, with each library's estimate of the 1980 population in its service area. By going through the data page by page, we identified 1586 public libraries which appeared to meet our criterion--serving over 25,000 people. To each of these, we sent a letter explaining our purpose and asking for the library's 1975 and 1980 total circulation and total operating expenditures.

We ended with usable data for 1336 libraries (84%); 220 (14%) did not respond even to a second request, and 30 (2%) reported that they were regional or cooperative system headquarters and did not serve people directly. The four figures for each library were entered into a computer file, the rate of change from 1975 to 1980 was calculated separately for circulation and for expenditures, and a list printed of the rates of change for each series from high to low. We wanted one sample of about

50 libraries which would represent accurately the changes in both circulation and expenditures; we tried several possibilities and finaliy drew from each distribution a systematic sample (of every 50th library), combined them into one sample, and found that the 53 libraries had exactly the same median rates of change in their circulation and in their expenditures as did all 1336.

These 53 libraries were then invited to become members of the new sample for the Indices for the 1980's and to contribute their data for 1981 circulation and expenditures. Since we had already calculated and published the Index values for 1980 and 1981, using the sample drawn from the 1970 census, it was to be hoped that the results for the sample from the 1980 census would be essentially the same. Table A shows that they are; the average difference on 10 values (other than 1980 Index values which are arbitrarily set at 100) is 1.2, the median 1, and the range 0 to 3. The new series of data was tied into the old by taking the index value for 1980 (based on 1970=100) and dividing it into the index number for each earlier year; the final complete results appear here in Table 1 in the Appendix (2).

Table A. Comparison Between 1970 Census Sample and 1980 Census Sample on Index Values for 1980 and 1981 (with 1980 = 100)

	Circulation			
	Index Value		% Adult	
Sample (N)	1980	1981	1980	1981
1970 Census Sample (50)	100	104	69%	70%
1980 Census Sample (53)	100	104	69%	70%

	Expenditures							
	Index Value		% for Salaries		% for Materials		% for Other	
	1980	1981	1980	1981	1980	1981	1980	1981
1970 Census Sample (50)	100	112	65%	67%	15%	14%	20%	19%
1980 Census Sample (53)	100	110	63%	64%	16%	15%	21%	21%

Each year the libraries in the sample are asked for their total circulation (subdivided if possible into adult and juvenile materials) and their total operating expenditures (subdivided into salaries, materials and all other costs) for the report year ending anytime in the previous calendar year. Each library's circulation for the previous year is divided by that same library's circulation for the base year (presently 1980); the resulting ratios are arranged in order from high to low, and the median value is the circulation index for that year. Each library's adult percentage of total circulation is calculated, and the arithmetic average of these percentages is reported. In the same fashion, the index of expenditures is calculated and the average percentages for salaries, for library materials and for all other costs. Since 1975, these calculated values have been published in American Libraries (3).

This method of finding the index values of circulation and expenditures is used in order to give unit weight to each library, and so as not to have the largest libraries dominate the results by their larger volume. And we use the median value of the sample libraries' ratios, rather than the arithmetic mean, because the former is not influenced by extreme cases. The means are used for the percentages of the subdivisions of circulation and expenditures, because it seemed desirable that these percentages in each case add up to 100. Each of these decisions rests on an assumption, and we have tested those assumptions.

The original raw data for the years 1974-83 were analyzed with the results shown in Table B. It is clear from columns b-e that the mean rate of change is almost always (19 out of 22 times) equal to or larger than the median, as a result of the influence of high values. The average annual net difference between the mean and median rates of change of circulation

Table B. Comparison of Three Different Methods of Calculating Index Values and the Percentage Composition of Circulation and Expenditures: 1974-1983.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Rate of Change From Base Year				Gross Change From Base Year	
	Circulation		Expenditures			
Year	Mean	Median	Mean	Median	Circulation	Expenditures
1970	100.0	100.0	100.0	100.0	100.0	100.0
1974	100.8	99.8	149.9	140.9	97.9	145.6
1975	108.0	109.4	169.3	155.6	104.7	158.8
1976	111.2	110.5	184.8	172.7	106.6	173.4
1977	110.3	111.8	204.0	191.9	105.1	191.4
1978	112.4	111.0	224.5	208.0	106.2	211.4
1979	112.6	108.8	233.6	219.7	103.5	220.3
1980	118.2	112.3	266.8	243.7	107.7	243.8
1981	119.0	115.3	288.6	271.4	109.7	265.8
1980	100.0	100.0	100.0	100.0	100.0	100.0
1981	104.7	103.7	111.4	110.7	104.8	111.2
1982	106.8	106.9	125.2	121.1	110.1	122.5
1983	111.1	107.3	130.7	129.5	115.6	129.4

(a)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	Percent of Total Circulation Which Was Adult			Percent of Total Expenditures for								
				Salaries			Materials			Other		
Year	Mean	Median	Gross	Mean	Median	Gross	Mean	Median	Gross	Mean	Median	Gross
1974	67.2	66.0	66.9	66.5	65.7	66.4	17.4	15.7	16.4	16.0	14.4	17.2
1975	65.6	64.3	65.9	65.6	65.4	65.9	16.7	15.6	16.9	17.7	16.7	17.2
1976	68.0	67.4	68.4	67.3	67.4	68.1	16.2	15.6	15.5	16.5	16.1	16.5
1977	67.7	67.8	68.1	67.4	66.8	66.4	16.4	15.4	16.6	16.2	15.2	17.0
1978	67.8	67.8	69.1	67.8	68.5	67.3	16.6	15.1	15.0	15.6	15.6	17.8
1979	68.8	69.7	69.4	68.3	68.4	66.9	15.7	15.1	15.1	16.0	16.1	18.0
1980	69.4	68.5	70.3	65.4	68.5	64.8	14.9	14.7	14.7	19.8	16.7	20.5
1981	69.6	71.2	71.1	67.1	66.3	67.1	14.3	14.6	14.0	18.6	17.6	18.9
1980	69.0	69.1	71.8	63.4	65.3	63.4	15.7	15.2	15.7	20.9	18.9	20.9
1981	69.6	69.3	71.9	64.1	65.6	66.3	15.1	15.1	14.0	20.8	20.2	19.6
1982	69.2	68.6	69.8	64.5	67.2	67.6	14.9	14.6	14.3	20.6	18.2	18.2
1983	68.3	67.9	69.1	65.7	66.4	66.1	14.5	13.8	12.0	19.9	18.9	21.8

is 1.7 in favor of means; in the case of expenditures, it is 11.1 in favor of means. Columns f-g of Table B show the values found when we divide the gross total circulation or expenditures for each year by the corresponding total for the same group of libraries for the base year. These gross changes in circulation for the 1970s sample are all lower than the mean and median rates of change; in the 1980s sample they exceed both the mean and median rates. In regard to expenditures, the gross changes are close to and usually above the median rates. It will be shown later that no one of these three measures (median, mean, and gross changes) correlates consistently better with other available benchmark data; the median might just as well continue to be used for the index values, and it does have an intuitive appeal as dividing the sample results into two equal halves of frequencies.

In the case of the percentage composition of circulation (adult and juvenile) and of operating expenditures (salaries, materials and all other costs), the mean and median of the individual libraries' percentages are very close--differing on the average by no more than one percentage point (see Table B). The gross method gives very similar results--also differing from the mean on the average by no more than one percentage point. We conclude that it is best to use the median rate of change for the Index of Circulation and the Index of Expenditures; the percent of circulation which is adult and the percentages of the components of expenditures could be equally well presented either as means or medians, but we might as well use means for the sake of continuity.

We would have liked to have had data on the split of adult circulation between adult fiction and adult nonfiction. This information had been given until 1968 (see column e of Table 2), but increasingly fewer libraries were able to supply this information, e.g., only 16 (32%) in 1975. For 1983, we asked the 53 libraries in the present sample for these data, and 20 (38%) responded. Their average percentages of the main components of total circulation were as follows:

	Adult Fiction	Adult Nonfiction	Juvenile
Mean	34.2%	33.6%	32.2%
Median	36.5%	32.4%	31.1%
Gross	33.5%	33.8%	32.7%

These 20 libraries had a mean rate of change in their total circulation from 1980 to 1983 of 113.6 and a median rate of change of 109.0, compared with 111.1 and 107.3 for all 53 libraries in the sample.

Only 37 libraries (70% of 53) could provide even adult and juvenile subtotals. Their mean adult circulation percentage in 1983 was 68.3% vs. 67.8% for the 20 libraries above, the median was 67.9% vs. 68.9%, and by the gross method 69.1% vs. 67.3%. The mean rate of change of the total circulation of these 37 libraries from 1980 to 1983 was 112.7, and the median 109.7 vs. 111.1 and 107.3 for all 53. It would appear that the 20 libraries are sufficiently representative of the 37 and the 53 to make it worthwhile to continue collecting the fiction/nonfiction division of adult loans.

It should be pointed out in this connection that libraries in the sample are asked to report their total circulation including the loan of audiovisual materials. If these are included in the adult and juvenile figures, they are used as such; but if audiovisual loans are reported to

us separately from adult and juvenile circulation, we have hitherto included them arbitrarily in adult loans--and specifically in adult nonfiction. Of the responses for 1983, 21 gave adult fiction/adult nonfiction subtotals which summed to less than the stated adult figure. Presumably the difference consisted of audiovisual items, and this was so specified in 14 cases. On the average, audiovisual circulation was 10.3% of the total circulation (median of 8%), 15.5% of total adult loans (12%), and 53.9% of adult nonfiction without AV (40%). In only one case was juvenile audiovisual loans specified, and in that case juvenile AV was almost as large as adult AV loans. Hereafter we will divide AV loans reported separately into adult and juvenile, according to the percentages of adult and juvenile book loans.

The general literature on index number construction suggests that a new base year be designated at intervals, because the farther one gets from the base year, the wider the dispersion of values from which the index is calculated and the less representative is any measure of central tendency. Below is shown the standard deviations of the rates of change for the years for which data are readily available. It will be seen that the dispersion does indeed increase markedly by the tenth year.

	1970 = 100							
Index	1974	1975	1976	1977	1978	1979	1980	1981
Circulation	16.4	19.5	23.9	24.9	28.3	32.1	37.2	42.1
Expenditures	28.3	44.7	52.2	60.7	71.3	76.3	91.6	102.1

	1980 = 100		
	1981	1982	1983
Circulation	7.3	11.7	16.4
Expenditures	9.9	26.6	20.4

Sec. 2. New Features

Two new features have been introduced in the published reports of the Indexes in recent years. One was started in 1983 and consists of the calculation of four new values for the current sample of 53 libraries--the median circulation per capita, the median expenditures per capita, the median expenditures per circulation, and the median expenditures per capita for library materials (see Table C). Three of these were made possible by adding to our available data the population served by each library in each year from 1980 on, and in no case using any population figure earlier than that of the 1980 census. These population figures were taken from the 1981-84 editions of the American Library Directory, cross-checking whenever possible with the compilations of data from the various state library agencies. This cross-check turned up the fact that two libraries in our sample were serving as regional libraries for the state and reported a substantially higher population served (in ALD) than the population of the area from which they got their local taxes.

The gross method reported in Table C consists (for example for column b) of adding all the reported circulation for a given year of all libraries in the sample, and dividing that figure by the total population served by all those libraries. For one variable (circulation per capita) the gross method is consistently lower than even the median, in two cases (expenditures per capita, and expenditures for materials per capita) it is always between the mean and the median, and in one case (expenditures per loan) it is higher than the mean. But in all these cases the gross method reflects the behavior of the large libraries, and to a lesser extent so also does the mean; the median is clearly the preferred value to be reported. Notice that in Appendix Tables 2 and 3, we show gross national ratios for circula-

tion per capita, expenditures per capita, and expenditures per loan; these are sometimes higher and sometimes lower than the values--even the medians--shown in Table C for a sample group of libraries, but such gross national ratios for the years before 1980 were the only ones available to us for the US, and for England and Canada also.

Table C. Interrelationships Between Circulation, Expenditures and Population for the Sample of Public Libraries: 1980-1984.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Circulation Per Capita			Expenditures Per Capita		
Year	Gross	Mean	Median	Gross	Mean	Median
1980	4.3	5.4	4.7	$8.42	$8.83	$7.39
1981	4.5	5.7	5.2	9.37	9.89	8.26
1982	4.7	5.8	5.2	10.31	10.95	9.49
1983	5.2	6.2	5.4	11.31	11.90	9.78
1984	5.3	6.4	5.3	12.78	13.06	10.73

(a)	(h)	(i)	(j)	(k)	(l)	(m)
	Expenditures Per Loan			Expenditures for Materials Per Capita		
Year	Gross	Mean	Median	Gross	Mean	Median
1980	$1.95	$1.60	$1.42	$1.17	$1.34	$1.10
1981	2.07	1.69	1.56	1.31	1.43	1.17
1982	2.17	1.82	1.57	1.47	1.54	1.18
1983	2.19	1.86	1.65	1.36	1.69	1.27
1984	2.41	2.04	1.81	1.78	1.80	1.49

Note: Some of the figures above differ from those published originally in American Libraries. Those shown here are corrected and revised from those published earlier.

The other new feature of the US Indexes was begun in 1980 and involves an estimate of total US public library circulation and total US public library expenditures. This was made possible by the 1974 NCES benchmark survey of all US public libraries, and then later by the 1978 and 1982 surveys (all in part by sampling)(4). The totals given by each of these surveys were multiplied by the percent of change in the appropriate Index

from the year of the survey to the current year in question. Since the Index values were based on a sample of libraries, the standard error of that value was found and doubled to get the 95% confidence interval for the current year's estimated total circulation and expenditures. Tables 2 and 3 show these estimated totals.

The data in column c of Table 2 and of Table 3 do not always agree with the figures in the published annual reports of the Indexes (3), for two reasons. For one thing, we have here used the NCES 1977 survey data from that year forward, whereas in fact it was not available until 1982; and the estimates for 1977-81 were originally based on the 1974 NCES survey (5). For a second thing, in 1982 the difference between the Index of Expenditures for 1977 (the year of the data in the 1978 NCES survey) and that of 1982 was applied directly to the NCES total expenditures figure instead of being calculated first as a percentage of the Index number for 1977; in other words, the published estimate of total US public library expenditures for 1982 was in error. We used this method of estimating total US public library circulation and expenditures retrospectively to get the results shown in column c of Table 2 and of Table 3.

Sec. 3. Tests of the US Indexes

A major question is whether the Indexes of American Public Library Circulation and Expenditures are accurate. To answer that we must have a criterion. Two possible criteria consist of data from the American Library Directory and for expenditures only from the US Bureau of the Census. The best single criterion consists of the totals reported in the seven national surveys by the US Office of Education or the National Center for Education

Statistics in the years from 1939 to 1982 (column b of Table 2 and of Table 3). We shall discuss them in that order.

Column d of Parts A and B of Appendix Table 4 are drawn from the various editions of the American Library Directory (ALD). Beginning with the 22d edition, published in 1960, state totals of various kinds of data appear at the beginning of each state's list of libraries; presumably these figures came from the state library agencies. We have compiled these data for each edition since the 22d, for public library circulation and for public library expenditures. Circulation was relatively easy to compile with only an occasional state figure being omitted, and these were gotten from the state library agency's annual report or by interpolation. Expenditure figures were given for only about 20% of the states; these were used when available, and for the others we used income. In either case it was not always clear whether state and federal funds were or were not included. In addition, all the state data reported in any one edition of the ALD are not for the same fiscal year. About 75% are usually from a given year, about 20% from the preceding year, and a few cases are from two years earlier or a year later. When we tried to adjust the values of the Indexes of American Public Library Circulation and Expenditures (column g of Parts A and B of Table 4), by weighting them by the proportion of reports for the two main years of ALD data in each case, we got almost the same average difference from the ALD index numbers as with the original US Index values (columns h and i of Parts A and B of Table 4, omitting years with interpolated ALD figures). We have therefore in all uses of the ALD data stayed with our original totals for each edition, though the expenditures data in particular are at best approximations of what is desired.

Table D shows among other things data on US public library circulation and expenditures (a) estimated by applying changes in the US Index to figures reported by USOE/NCES surveys (see p. 11 above), and (b) found by adding state totals in all available editions of ALD. When we compare these two series of circulation totals (columns b and f), ALD figures are below US Index estimates in 9 of the 15 years (by an average of 1.9% of the latter) and are above in 6 years (by an average of 8.3%); disregarding sign, the ALD series differs from the US Index numbers by an average of 4.5%. When we compare the median index values for the US Index of Circulation and the index values for ALD circulation (columns d and g of Table D), we find that ALD index numbers are below those of the US Index in 10 years (by an average of 2.5), are the same in 3 years (other than 1980), and are higher in only one year--because the 1980 ALD circulation is measurably higher than the US Index Circulation and therefore produces generally lower index values for the other years. When we consider the two series of index numbers for all 14 years, ALD numbers differ by an average of 1.6. The average difference for 7 years between ALD circulation index values and (a) mean US Index of Circulation values is 2.1, and (b) gross US Index of Circulation values is 2.7.

In regard to expenditures (Part B of Table D), ALD figures are higher than US Index estimated totals in 8 years, at an average of 14.8% of the latter, almost equal in one year, and lower in 7 years (by an average of 2.8%); disregarding sign, the annual average difference is 8.6%. Presumably this reflects the fact that the ALD data are of income, and the US Index data are of expenditures. The index numbers for ALD expenditures are consistently higher than those for the US Index, by an annual average of 9.2; this is because the 1980 ALD total is much lower than that estimated by the

Table D. Annual Total US Public Library Circulation and Expenditures in Comparison with Other Series: 1958-1983.

Part A. Circulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	US Index - Circulation				ALD Circulation	
	Total	US Index (1980 = 100)			Total	Index
Year	(000,000's)	Mean	Median	Gross	(000,000's)	(1980=100)
1960	(599.3)	--	72	--	696.3	69
1963	(657.7)	--	79	--	779.2	78
1965	(761.8)	--	83	--	830.4	83
1967	(822.3)	--	82	--	822.2	82
1969	(883.0)	--	88	--	846.4	84
1971	(923.2)	--	92	--	898.2	89
1973	(883.0)	--	88	--	887.9	88
1975	(979.9)	91	98	95	929.3	93
1977	986.7	93	99	96	963.3	96
1978	(986.7)	95	99	97	969.6	97
1979	(967.0)	95	97	94	965.6	96
1980	(966.6)	100	100	100	1,004.6	100
1981	(1,037.0)	105	104	105	1,035.7	103
1982	(1,066.6)	107	107	110	1,057.5	105
1983	(1,070.0)	111	107	116	1,088.4	108

Part B. Expenditures

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	US Index - Expenditures				ALD Expenditures	
	Total	US Index (1980 = 100)			Total	Index
Year	(000,000's)	Mean	Median	Gross	(000,000's)	(1980=100)
1958	($196.4)	--	15	--	$250.6	16
1960	(222.7)	--	17	--	271.1	18
1963	(274.9)	--	21	--	360.9	24
1965	(371.6)	--	24	--	446.6	29
1967	(535.9)	--	30	--	593.4	39
1969	(661.3)	--	37	--	656.2	43
1971	(803.9)	--	45	--	821.7	54
1973	(964.9)	--	54	--	927.5	60
1975	(1,125.9)	63	63	65	1,153.6	75
1977	1,359.6	76	78	79	1,351.1	88
1978	(1,482.0)	84	85	88	1,477.7	96
1979	(1,551.3)	88	89	90	1,583.2	103
1980	(1,743.0)	100	100	100	1,534.1	100
1981	(1,917.1)	111	110	111	1,917.1	125
1982	(2,108.8)	125	121	122	2,086.5	136
1983	(2,266.5)	131	130	129	2,248.8	147

Table D, p. 2.

Part B, cont'd.

(a)	(h) Public Library Expenditures from US Census Bureau	
	Total	Index
Year	(000,000's)	(1980=100)
1958	238.6	14
1960	278.0	16
1963	399.0	24
1965	444.0	26
1967	535.0	32
1969	634.0	37
1971	761.0	45
1973	877.0	52
1975	1,119.0	66
1977	1,259.0	74
1978	1,362.0	80
1979	1,504.7	89
1980	1,693.6	100
1981	1,865.2	110
1982	1,994.8	118
1983	2,213.2	131

Notes:

Figures in parentheses are estimates.

Col. (b) comes from cols. (b) and (c) of Table 2.

Cols. (c)-(e) come from Table B, and col. (c) data for 1960-73 come from col. (c) of Table 1.

Cols. (f)-(g) come from cols. (d)-(e) of Table 4.

Cols. (h)-(i) come from cols. (j)-(k) of Table 3.

US Index, and therefore produces generally higher index values for the other years. The remarkable thing is that the ALD totals of circulation--and to a lesser extent those of expenditures--are as close as they are to the totals estimated from the US Index values.

The average difference over 7 years between the index values of the ALD expenditure totals and (a) the mean US Index of Expenditure values is 13.1, and (b) the gross US Index of Expenditure values is 12.3.

Part B of Table B also shows the total annual operating expenditures of American public libraries as recorded by the US Bureau of the Census (in its annual bulletin on Governmental Finances), for those years for which we have ALD data. In this 3-way comparison, the raw figures for USCB are lower than those of the US Index in 12 years and higher in 4; the annual average difference is 10.2% of the US Index values. When we compare USCB and ALD, the former are lower in 14 of the 16 years and higher in two, by an annual average difference of 5.1% of ALD values. USCB index numbers differ from the US Index by an annual average of 1.8 points--higher in 5 years, the same in 4, and lower in 6. USCB index numbers differ from ALD index values by an annual average of 9.3--the same in one year and lower in 14.

From Table 3 in the Appendix here, we can compare the total expenditures of US public libraries, estimated from USOE/NCES benchmark surveys by changes in the Index of American Public Library Expenditures (cols. b and c), with the figures on public library expenditures reported by the Bureau of the Census (col. j), for 32 years. For 15 years (1953-66 and 1976), the USCB figure is higher than the US Index estimate; for 17 years (1952, 1967-75, and 1977-83), it is lower. When we look at the index numbers for these two series (col. d of Table 1 and col. k of Table 3), we find that USCB is higher than the US Index in 9 years for an annual average of 2.4 points,

the same (when rounded whole percentages are used) in 9 years, and lower in 13 years for an annual average of 2.2. Disregarding sign, the annual average difference over 31 years is 1.7 points.

We have another basis for estimating the accuracy of ALD circulation totals, and that is with regard to Canadian public library circulation (see Table E, Part A). Each year for many years, Statistics Canada has conducted a national survey of Canadian public libraries. When we compare its recorded totals of circulation with those found by adding together the provincial figures in ALD for each available year of the latter (columns d and e of Table E), we find that ALD is higher than Statistics Canada in 2 years (by an average of 6.2% of the latter), the same in 4 years, and below in 10 years (by an average of 6.8%); disregarding sign, ALD figures differ from those of Statistics Canada by an average of 6.7%--more than the 4.5% difference in the case of the US Index. When we compare index numbers, the ALD series is higher in 8 years (by an average of 2.9 points--not percentages) and is lower in 7 years (by an average of 4.1); disregarding sign, ALD index numbers differ from SC index numbers by an average of 3.5 over 15 years--an even larger average difference than in the case of US circulation.

We can also compare the two series in regard to total current operating expenditures (see Part B of Table E). The total annual operating expenditures (usually income in the case of ALD) is higher in the ALD series in 6 years for an annual average of 6.8% of the Statistics Canada figures, and lower in 10 years for an annual average of 6.5%; disregarding sign, the average difference is 6.6%. When we look at the index numbers of the two series, in three years ALD is higher by an average of one point, is the same in two years, and is lower in 10 years by an average of 5.2 points;

Table E. Annual Total Canadian Public Library Circulation and Expenditures from Statistics Canada and American Library Directory: 1956-1983.

Part A. Circulation

(a)	(b)	(c)	(d)	(e)
	SC Circulation		ALD Circulation	
Year	Total (000,000's)	Index (1980=100)	Total (000,000's)	Index (1980=100)
1956	35.8	28	38.1	31
1960	56.2	44	45.3	37
1962	65.1	51	69.1	57
1965	78.3	62	78.3	64
1967	81.8	64	81.5	67
1969	92.9	73	91.4	75
1971	97.3	77	97.1	80
1972	95.7	75	95.5	78
1976	112.2	88	100.9	83
1977	114.6	90	112.6	91
1978	116.2	92	111.2	91
1979	121.5	96	114.8	94
1980	126.9	100	122.1	100
1981	131.8	104	126.0	103
1982	144.0	114	129.6	106
1983	154.8	122	143.2	117

Part B. Expenditures

(a)	(b)	(c)	(d)	(e)
	SC Expenditures		ALD Expenditures	
Year	Total (000,000's)	Index (1980=100)	Total (000,000's)	Index (1980=100)
1956	$10.3	4	$11.7	5
1960	17.4	7	18.5	7
1962	21.9	9	23.3	9
1965	30.0	12	28.5	11
1967	41.2	16	42.7	17
1969	(51.9)	20	52.8	21
1971	70.6	28	67.5	27
1972	78.0	35	85.1	34
1976	156.6	62	118.6	47
1977	174.1	69	161.8	64
1978	198.8	78	195.2	77
1979	219.9	87	214.2	85
1980	253.9	100	252.3	100
1981	294.8	116	282.9	112
1982	345.1	136	323.0	128
1983	406.7	160	369.3	146

Notes:
Figures in parentheses are estimates.
Cols. (b)-(c) come from cols. (b)-(c) of Table 9.
Cols. (d)-(e) come from cols. (d)-(e) of Table 11.

disregarding sign, the annual average difference is 3.7. In both cases, the differences are less than in the case of US library expenditures.

The most important criterion for judging the accuracy of the Indexes of American Public Library Circulation and Expenditures is by comparing it with the results of the USOE/NCES benchmark surveys. Looking first at the totals in Table F below (Part A), ALD estimates of circulation differ from USOE/NCES figures by an average of 3.1% in the last 3 surveys, and in the case of expenditures by 2.8%. US Census Bureau figures deviate by an average of 12.3% for the last four surveys. Translating the relevant data from Tables 2 and 3 into the index numbers shown below, we see that the US Index and ALD are both three points below the NCES value for 1982 circulation, and that the US Index agrees with the NCES index value for 1974 circulation while the estimated ALD index value is four points higher. Over the span of the six USOE/NCES surveys, the US Index has an average difference of 7.5 points. In regard to expenditures, the US Index is far above the NCES figure for 1982, while ALD and USCB are relatively close and five to nine points lower; the US Index is below the 1977 NCES index value by 2 points while the ALD estimated value is 11 points higher, and the USCB is only 2 points higher. For the 1956 and 1974 surveys, the US Index is off by an average of 3.5 points, and the USCB series by 3 points. Over all four surveys for which US Index data are available, the average difference with USOE/NCES is 8.0; over 3 surveys for which USCB data are available, the average difference with USOE/NCES is 3.7.

Table F. Totals and Index Numbers of All Relevant Series

Part A. Totals (000,000's)

	Circulation		Expenditures		
Year	USOE/ NCES	ALD	USOE/ NCES	ALD	USCB
1939	415.9	--	$ 48.8	--	--
1945	333.4	--	61.8	--	--
1950	384.6	--	109.8	--	--
1956	499.4	--	170.2	--	199.2
1974	892.9	(908.6)	1,018.8	(1,040.6)	968.0
1977	986.7	963.3	1,359.6	1,351.5	1,259.0
1982	1,113.2	1,057.5	2,212.3	2,086.5	1,994.8

Part B. Index Numbers (1977=100)

	Circulation			Expenditures			
Year	USOE/ NCES	US Index	ALD	USOE/ NCES	US Index	ALD	USCB
1939	42	59					
1945	34	41					
1950	39	47		8	(12)		
1956	51	61		12	17		16
1974	90	90	(94)	75	73	(84)	77
1977	100	100	100	100	100	100	100
1982	113	110	110	163	186	154	158

We summarize in Table G the comparisons between (a) the median, mean, and gross index values of the US Indexes of Circulation and Expenditures, and (b) the index values of ALD and USOE/NCES circulation and expenditures and of USCB expenditures. In all cases the differences are calculated without regard to sign. Of the 5 comparisons, the median is lowest in two and the mean is lowest in three (including both comparisons with USOE/NCES data). The average of the five differences is 3.6 for the median, 3.0 for the mean, and 4.1 for the gross change.

Table G. Comparisons Between Three Measures of the US Indexes and Three Other Benchmark Surveys (1977=100).

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	US Index				USOE/	
Year	Median	Mean	Gross	ALD	NCES	USCB
Part A. Circulation						
1974	90	91	95	--	90	--
1975	99	98	99	97	--	--
1977	100	100	100	100	100	--
1978	100	102	101	101	--	--
1979	98	102	98	100	--	--
1980	101	108	104	104	--	--
1981	105	113	109	107	--	--
1982	108	115	115	109	113	--
1983	108	115	121	112	--	--

Average annual difference between (b) and (e): 2.1
Average annual difference between (c) and (e): 3.1
Average annual difference between (d) and (e): 3.0

Average annual difference between (b) and (f): 2.5
Average annual difference between (c) and (f): 1.5
Average annual difference between (d) and (f): 3.5

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	US Index				USOE/	
Year	Median	Mean	Gross	ALD	NCES	USCB
Part B. Expenditures						
1974	73	74	76	--	75	77
1975	81	83	82	85	--	89
1976	91	91	91	93	--	99
1977	100	100	100	100	100	100
1978	109	111	111	109	--	108
1979	114	116	114	117	--	120
1980	128	132	127	114	--	135
1981	141	146	141	142	--	148
1982	155	164	154	155	163	159
1983	167	172	163	167	--	--

Average annual difference between (b) and (e): 3.0
Average annual difference between (c) and (e): 5.4
Average annual difference between (d) and (e): 3.6

Average annual difference between (b) and (f): 5.0
Average annual difference between (c) and (f): 1.0
Average annual difference between (d) and (f): 5.0

Average annual difference between (b) and (g): 5.6
Average annual difference between (c) and (g): 4.2
Average annual difference between (d) and (g): 5.6

In conclusion on this point, it seems that all available series of data follow the same general trend over the years, and that the US Index is as good as ALD or USCB. There is no indication of a consistent bias or deficiency in the US Index data. This is all the more surprising when it is realized that the US Index is based on a small sample of libraries which serve over 25,000 people each, and that the other series (USOE/NCES, ALD, and USCB) use much larger samples if not the whole population of libraries including specifically libraries which serve fewer than 25,000 people.

It may be that small public libraries have experienced the same percentage changes as have the medium-sized and large libraries. All available evidence however points in the opposite direction. For example, an index of Illinois public library circulation was maintained from 1939-53, as a pilot model for the US Index, in part because each year's index value could be checked against the total circulation for all Illinois public libraries. There were 288 such libraries in 1948 of which only 23 (8%) served over 25,000 people each. The index values for all Illinois public libraries' circulation and for the US Index, for 1939-51, show an annual average difference of 4 index points (6). The smaller Illinois public libraries had a slower decline in their circulation from 1940-45, and a slower increase from 1948-51, than did the national sample of larger libraries.

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
IL Index	100	99	92	85	80	78	78	79	74	74	77	78	77
US Index	100	98	90	80	75	75	75	76	76	76	82	85	86

This disparity continues to this day. From the Illinois State Library's Analyses of the Illinois Public Library Statistics for 1978/79 through 1982/83,

we calculated the total circulation and total operating expenditures separately for those libraries serving fewer than 25,000 persons (507 or 87% of all Illinois public libraries in 1983), and for those serving over 25,000 people (74 or 13%). The results in terms of index numbers (1980=100) are shown here, and in comparison with the US Index values. While both population size groups have exceeded the US Index, the smaller libraries started farther back in 1979 and have increased faster than the larger ones.

	Circulation					Expenditures				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
IL libraries										
< 25,000	94	100	111	113	120	87	100	118	144	158
> 25,000	100	100	106	110	112	99	100	118	136	135
US Index	97	100	104	107	107	89	100	110	121	130

It is possible that small public libraries in Illinois are somehow different from small public libraries elsewhere in the country. Data from the four most recent USOE/NCES published surveys belie that. The US Index agrees more closely with the larger public libraries than with the smaller in two of the four cases.

	Circulation Index Values from USOE/NCES Surveys					Expenditures Index Values from USOE/NCES Surveys				
Year	< 10,000	10,000-50,000	50,000+	Total	US Index	< 10,000	10,000-50,000	50,000+	Total	US Index
1956	--	--	--	--	--	31	14	16	17	23
1974	100	100	100	100	100	100	100	100	100	100
1977	120	116	106	110	111	152	144	129	134	137
1982	124	123	126	125	122	--	--	--	217	207

Construction of this last set of figures suggested another possibility, viz., that large libraries account for the larger portion of total circulation and expenditures, and that therefore changes in the national totals tend to agree with the US Indexes because both series are measures essentially of changes manifested by the larger public libraries. The evidence

from the last three USOE/NCES surveys supports this idea, as shown below in Table H; in each cell the first percentage is of the number of libraries, and the second of the total circulation or expenditures. By the same token, it follows then that the Indexes of American Public Library Circulation and Expenditures--as presently constructed--are not safe guides for libraries serving fewer than 25,000 people.

Table H. Percentage Composition of USOE/NCES Survey Data by Public Libraries of Different Population Size Groups

	Circulation				Expenditures			
Year	< 10,000	10,000-50,000	50,000+	Total	< 10,000	10,000-50,000	50,000+	Total
1956	--	--	--	100%	72%-12%	24%-18%	4%-70%	100%
1974	65%-12%	25%-27%	9%-61%	100%	65%-7%	25%-23%	9%-70%	100%
1977	65%-13%	26%-28%	9%-59%	100%	65%-7%	26%-24%	9%-69%	100%
1982	64%-12%	26%-26%	10%-62%	100%	--	--	--	--

Table I shows that even within the 50 or 53 library sample of the US Index, substantial differences exist between the values for those libraries serving fewer than 100,000 persons each and those serving more. Of the 116 comparisons, the total sample figure is the same for both size groups or is equidistant in 29%, is closer to that for the smaller size group in 49%, and is closer to that of the larger group in 22% (though some of these differences are small). Libraries of different sizes apparently do indeed have a different pattern of change in regard to the changes over time in their circulation and expenditures.

Table I. Comparisons Between Small Libraries (Those Serving Fewer Than 100,000 Persons Each) and Large Libraries (Those Serving Over 100,000) of the US Index Sample: 1974-79 (1970=100) and 1981-84 (1980=100).

Part A. Circulation and Expenditures

(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Circulation	Percent	Expenditures	(M) Percent for		
Year	Index (Med)	Adult (M)	Index (Med)	Salaries	Materials	Other
1970	100/100/100	61/61/61	100/100/100	65/68/66	20/18/19	15/14/15
1974	102/ 98/100	68/67/67	139/142/141	68/64/67	17/18/17	15/17/16
1975	106/110/110	66/65/66	156/156/156	66/66/65	16/17/17	18/17/18
1976	111/110/111	69/66/68	171/179/175	67/67/67	16/17/17	17/17/16
1977	115/110/111	68/67/68	179/192/192	68/66/67	16/18/17	16/17/16
1978	110/112/111	68/66/68	196/213/209	69/66/68	17/16/16	14/18/16
1979	104/113/109	69/68/69	205/246/220	69/67/68	16/16/16	15/17/16
1980	100/100/100	67/76/69	100/100/100	63/64/65	17/13/15	20/23/20
1981	104/104/104	68/75/70	111/110/110	65/62/67	15/14/14	20/23/19
1982	106/109/107	68/72/69	123/121/121	64/65/64	15/14/15	21/21/21
1983	107/107/107	68/70/68	128/130/130	66/64/66	15/13/14	19/22/20
1984	110/106/109	68/71/69	148/140/145	65/62/64	14/15/14	21/22/22

Part B. Ratios

(a)	(h)	(i)	(j)	(k)
			Expenditures	Materials
Year	Circ PC (Med)	Expends PC (Med)	Per Loan (Med)	Expends PC (Med)
1970	6.8/3.7/4.9	$ 4.75/2.31/3.37	$0.77/0.77/0.77	$0.90/0.46/0.68
1974	6.7/3.6/5.1	6.41/3.70/5.15	1.14/1.07/1.14	1.04/0.57/0.87
1975	7.1/3.5/5.2	7.04/4.13/5.69	1.23/1.06/1.14	1.11/0.69/0.96
1976	6.7/3.8/5.2	7.52/4.24/6.26	1.33/1.14/1.25	1.27/0.65/1.11
1977	6.5/3.9/5.4	8.56/5.34/6.72	1.38/1.37/1.37	1.26/0.84/1.16
1978	6.6/3.9/5.5	8.47/5.70/7.52	1.54/1.35/1.43	1.53/0.90/1.21
1979	6.4/3.9/5.6	8.81/6.03/7.46	1.49/1.50/1.50	1.34/1.02/1.22
1980	5.6/3.9/4.7	7.55/7.38/7.39	1.40/1.78/1.42	1.18/0.83/1.10
1981	5.8/4.0/5.2	8.26/8.35/8.26	1.48/1.84/1.56	1.30/1.10/1.17
1982	5.8/4.0/5.2	9.61/7.63/9.49	1.55/1.72/1.57	1.27/1.05/1.18
1983	6.5/4,4/5.4	10.27/8.36/9.78	1.65/1.60/1.65	1.46/1.09/1.27
1984	6.3/4.4/5.3	11.54/9.28/10.73	1.78/2.03/1.81	1.50/1.24/1.49

Notes: There are three values in each cell, first the mean or median for those libraries serving fewer than 100,000 persons each, second the mean or median for those libraries serving over 100,000 persons each, and third the mean or median for all libraries in the sample. Means are shown in columns c and e-g; medians are shown in all other columns. There were 31 libraries

Table I, cont'd.

serving fewer than 100,000 persons each in the 1970's sample, and 37 in the 1980's sample; there were 19 libraries serving more than 100,000 persons each in the 1970's sample, and 16 in the 1980's sample; there were 50 libraries in all in the 1970's sample, and 53 in the 1980's sample.

How to read this table: Consider column b and the 1974 row. The median index value of the rates of change of the total circulation of 31 public libraries serving fewer than 100,000 persons each, in 1974 compared with 1970, was 102. The median index value of the rates of change of the total circulation of 19 public libraries serving more than 100,000 person each, in 1974 compared with 1970, was 98. The median index value of the rates of change of the total circulation of all 50 public libraries, in 1974 compared with 1970, was 100.

Another test of the accuracy of the US Index of Expenditures is provided by the fact that the Bowker Annual has regularly reported the national total of public library expenditures for library materials, compiled from the data supplied by local libraries for the American Library Directory. Table I compares those figures with data calculated by multiplying the estimated total operating expenditures of US public libraries by the percent for library materials from the Index of American Public Library Expenditures. In 5 years the ALD total is less than the US Index figure by an average of 2 points. In 8 of the 13 years the latter figure is smaller than the former by an average of 24 points, in part at least because the ALD includes many small libraries which typically spend a larger percentage of their budget on materials than do large libraries. The US Index involves only libraries serving over 25,000 people each.

Table J. Comparisons Between US Public Library Expenditures for Materials from the American Library Directory and from the Index of American Public Library Expenditures

(a)	(b)	(c)	(d)	(e)	(f)
	From ALD		From IAPLE		
Year	Total (000's)	Index No. (1980=100)	Total (000's)	Index No. (1980=100)	d÷b
1950	$18,733	4.9	$19,760	7.6	105
1956	32,771	8.6	30,640	11.7	93
1963	65,657	17.2	41,236	15.8	63
1965	85,746	22.4	48,307	18.4	56
1968	114,669	30.0	91,089	34.8	79
1970	131,282	34.3	139,191	53.2	106
1972	139,471	36.4	163,003	62.3	117
1974	161,604	42.3	174,212	66.2	108
1976	201,377	52.6	210,335	80.4	104
1978	336,291	87.9	237,120	90.7	71
1980	382,736	100.0	261,457	100.0	68
1982	358,032	93.5	316,318	121.0	88
1983	362,635	94.7	317,311	121.4	88

Though the US Index sample of libraries has only 53 cases, one naturally speculates on whether there are any regional differences in the trends of circulation and expenditures of even four main regions of the country. We used the regions of the US Bureau of the Census (see Statistical Abstract of the United States: 1984, p. 15), and merged the index numbers of the 1980 sample and 1970 sample for each region, in the fashion described in the notes to Table 1a. The results are shown in Table K. The biggest differences are in circulation, where the southern and western regions had an annual average differential in their median rate of change of 12 to 13 points over the US Index as a whole, while the other two regions had small annual average differences. In regard to expenditures, the northeast had an annual average positive difference of 3.9, north central 1.6, west 0.9, and South -2.3.

Table K. Comparisons Between Index Numbers for the Whole Sample and for Its Members in Each of Four Geographic Regions of the US: 1970-84 (1980=100)

Year	Northeast (N=13, 13) Mean/Median	North Central (N=18, 14) Mean/Median	South (N=7, 16) Mean/Median	West (N=12, 10) Mean/Median	US Index (N=50, 53) Mean/Median
Part A. Circulation					
1970	90/92	88/85	75/69	95/100	85/89
1974	95/92	87/85	65/65	102/106	85/89
1975	98/94	93/95	76/75	108/115	91/98
1976	101/96	93/93	84/77	112/116	94/99
1977	102/98	93/96	82/76	109/116	93/99
1978	102/100	94/97	92/80	108/111	95/99
1979	102/100	96/96	95/83	105/99	95/97
1980	100/100	100/100	100/100	100/100	100/100
1981	105/103	102/103	104/104	109/106	105/104
1982	110/107	103/101	105/105	111/112	107/107
1983	112/101	110/106	109/109	114/116	111/107
1984	114/111	108/102	112/110	118/122	113/109
Annual average difference of medians with US Index:	-0.3	-3.5	-13.1	12.0	
Part B. Expenditures					
1970	40/49	41/44	28/30	41/40	37/41
1974	63/68	61/63	43/44	60/56	56/57
1975	70/76	64/67	55/54	70/64	63/63
1976	74/87	69/72	63/55	77/71	69/71
1977	79/94	77/78	77/82	82/76	76/78
1978	128/87	84/91	90/84	90/84	84/85
1979	88/94	90/96	95/92	87/78	88/89
1980	100/100	100/100	100/100	100/100	100/100
1981	105/108	112/111	115/114	112/110	111/110
1982	116/119	116/119	136/131	132/127	125/121
1983	119/117	128/124	141/136	133/137	131/130
1984	139/134	142/143	144/142	150/153	143/145
Annual average difference of medians with US Index:	3.9	1.6	-2.3	0.9	

Notes: For each of the regions there is given in parentheses the number of libraries first in the 1970 sample and second in the 1980 sample.

Sec. 4. Comparisons of the US Indexes with Data from England and Canada

A. England and Wales

For 1939 and 1947-61, the Library Association collected and published statistics on circulation and expenditures for almost all public libraries in the United Kingdom (England, Wales, Scotland and Northern Ireland). Beginning in 1964, the Chartered Institute of Public Finance and Accountancy took over this task, but not until 1975 were totals or other analyses of the raw data published and then they were given separately for each of the four parts of the United Kingdom. The data for public libraries in England and Wales are shown in Appendix Table 6 (circulation) and 7 (expenditures). Comparable US data are in Tables 1-3.

English public library circulation totalled 240,000,000 in 1939 (58% of US public library circulation of 416,000,000); in 1983, English library circulation was 592,000,000 (55% of the US total of 1,070,000,000). The ratio was not always that even; it was 70% in 1961 (for all of the United Kingdom). In any case, the population served was consistently smaller in the UK/England and Wales than in the US, with the result that public library circulation per person served has consistently been higher there than here (with the sole exception of 1939); in recent years the US figure has been only about 40% of the English per capita.

One possible explanation for this disparity in circulation per capita may be the fact that British public libraries loan about half again the percentage of adult fiction as do US libraries--53% to 60% there versus 21% to 48% here (column e of Table 2 and column d of Table 6). On the other hand, US public libraries loan more than twice the percentage of juvenile books as do English libraries--30% to 52% here versus 15% to 23% there.

Using the two series of index numbers--for English public library circulation (col. c of Table 6, rounded to whole numbers) and for American (col. b of Table 1), the English were consistently higher in the years 1947-60 and lower in all but one year from 1975-83. English libraries' circulation peaked in 1980; American in 1983. Though public library circulation in the two countries followed a generally similar path, the differences between them are substantial. In 13 years, the index numbers of English public library circulation were higher than the US Index, by an annual average of 6.3 points. In one year the two series were the same. In 10, the English index was below the American index by an annual average of 5.8. Disregarding sign, the annual average difference is 5.8 index points.

We look next at public library expenditures in the two countries, and convert English pounds into US dollars at the annual average rate of exchange (col. 1 of Table 7, and cols. b and c of Table 2). English public library total operating expenditures in 1950 (the first of a continuous series of years for which we have data from both countries) were 22% of the comparable US figure; in 1983, they were 11%. There were minor deviations from a consistent relationship (e.g., 26% in 1961) but a comparison of the index numbers for the two series (both in dollars--col. d of Table 1 and col. m of Table 7) clearly shows that American public library expenditures increased faster than their English counterpart from 1950-83. In particular the index of US expenditures has increased since 1980 while that of England and Wales has declined.

When we take account of inflation (col. g of Table 1 and col. f of Table 7), the American advantage remains from 1950 to 1978 (except for 1976); in 1979 the two series are equal, but in 1981-83 the English index pulls

ahead of the US index by an average of 2.3 points. In domestic purchasing power, English public libraries have done better than US libraries in the last three years.

In expenditures per capita (per person served) (col. f of Table 3, and col. n of Table 7 so as to have both series in US dollars), the remarkable thing is how much alike they are. Per capita expenditures in England were 50% of what they were in the US in 1950, but by 1979 they were 119% of the US figure and have stayed higher in the succeeding four years. And when we deflate both series and convert the British pounds to dollars (col. i of Table 3 and col. o of Table 7), English expenditures per capita were higher than in the US for 21 of the 32 years for which data are available.

In regard to the objects of their expenditures, English public libraries have always devoted a higher percentage to the purchase of materials and a lower percentage to salaries than have American libraries. In 1981-83 their annual averages were 18% and 53%; in the US they were 14% and 66%. Since English public libraries loan more than half as many books as do US libraries and spend less than a fifth as much, it is to be expected that their expenditures per loan, corrected for inflation and converted into dollars (col. p of Table 7), will be less than the comparable statistic for US libraries (col. h of Table 3). Comparable data are available for only 19 years; for 1975-83, the English unit cost averages 46% of the US figure.

B. Canada

From 1939-53, the Dominion Bureau of Statistics collected and published data on Canadian public libraries every two years. From 1956-83 similar data are available annually, since 1958 by Statistics Canada.

Canadian public library circulation was 5% of US circulation in 1939, and 14% in 1983; and the population served relationship was roughly comparable--7% in 1953 and 10% in 1983. The index of Canadian public library circulation (col. c of Table 9) starts lower than that of US circulation (col. b of Table 1) and never catches up until 1979. In 1981, both series show 4% gain, but in 1982 Canada moved ahead. The annual circulation per capita in the two countries is very close--Canada's was higher than that of the US in 18 of the years between 1953-83 for which we have data (an average difference of 0.6); they were the same in three years; and Canada's was lower in 7 years (by an average of 0.2). Disregarding sign, the average difference over 28 years was 0.4.

We have data on the composition of Canadian public library circulation for only the first ten (mostly alternate) years in the series (col. h of Table 9). In those years, the Canadian circulation averaged 7.7 percentage points above the US for adult fiction, 3.8 below for adult nonfiction and 4.2 below for juvenile loans. Even so, Canadian circulation is more like that of the US than it is like that of England and Wales, though this is based on only three years in common (1953, 1956 and 1957).

	Adult Fiction	Adult Nonfiction	Adult Total	Juvenile
Canada	38%	16%	54%	46%
England	57	22	79	22
US	26	24	50	50

In regard to expenditures, the total for Canada in 1939 in Canadian dollars was 4% of that for the US (col. b of Table 10, and cols. b and c of Table 3), and in 1983 18%. When we convert Canadian into US dollars (col. n of Table 10), these percentages are 4% for 1939 and 15% for 1983,

almost the same as those for circulation. Similarly the index of Canadian public library operating expenditures (col. d of Table 10) starts lower than the US index in 1939 (col. d of Table 1), never caught up until 1980 which is 100, and thereafter pulled ahead. Converting the Canadian index into one of US dollars (col. o of Table 10) does not alter the long-term relationship, and indeed the 1981-83 index values are lower than those in Canadian dollars.

Expenditures per capita (per person served) in Canadian dollars (col. e of Table 10) is very much like that of the comparable US series (col. f of Table 3), but the symmetry is broken when both are corrected for inflation (col. j of Table 10, and col. i of Table 3). The US series starts 11% higher in 1953, reaches a peak in 1973 (18% higher), and declines to a figure in 1983 which is over one-third lower than the Canadian statistic. And when the deflated Canadian per person expenditure is converted into US dollars (col. q of Table 10), the relationship is not much better; the US figure was 9% higher in 1939, 18% higher in 1973, and 21% lower in 1983.

Expenditures per loan in the two countries are very much the same; the US figure was 20% higher than the Canadian in 1939 and 7% higher in 1974, while the Canadian unit cost was 6% higher than the US figure in 1976 and 24% higher in 1983. When these are both corrected for inflation and the Canadian series converted into US dollars (col. r of Table 10, and col. h of Table 3), the US series is found to be almost always higher--by 11% in 1953, by 22% in 1973 when the US figure peaked, and by 9% in 1983. In 1975 and 1976, the Canadian unit cost exceeded that of the US by an average of 7%.

The distribution of Canadian and US operating expenditures has grown increasingly the same. In the first four years (1939, 1945, 1950, and 1956),

the average for salaries in Canada (col. c of Table 10, interpolating between 1949 and 1951) was 55% vs. 66% in the US; in the last four years (1978-81), it was 62% vs. 67%. In the first four years, the average percentage for materials was 23% in Canada and 20% in the US; in the last four years it was 18% and 15%.

Sec. 5. Correlations Between Variables

We ran a series of correlations between various pairs of variables, using SPSS to get Pearson product-moment coefficients. Since even a high correlation indicates only that two variables fluctuate together but not how close they are to each other, whenever we correlated index numbers we calculated also the annual average difference between them without regard to sign. Finally, for each correlation coefficient, we report the confidence interval within which we can be 95% certain that the true coefficient falls. To do this we used the formula and table from H. M. Blalock Jr., Social Statistics (revised 2d ed.; McGraw-Hill, 1979) p. 420 and 617-18. All these calculated values appear in Table 13, and those for the US are summarized in Table L.

In the great depression of the 1930s, US public libraries had the highest circulation in their history up to then, simultaneous with record levels of US unemployment. As a result, librarians have ever since assumed that a high positive correlation exists between circulation and unemployment (7). In the only known study of this point, James found no significant correlation between public library circulation and unemployment in any of 20 US urban areas between 1960 and 1979 (8). He removed the influence of book collection size, the total number of volumes added yearly, the number of library employees, and total expenditures; this was not done in the present study.

Table L. Correlation of Selected Measures of US Public Library Circulation and Expenditures with Employment and Unemployment.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
		Annual Totals		Index Values			
Measure	Years Covered	Employment	Unemployment	Employment a/b		Unemployment a/b	
Part A1. Public Library Circulation							
1. Annual totals	1939-83	.95	.62	--		--	
2. Median index	1939-83	--	--	.93/8.9		.65/23	
3. Annual totals of adult circulation	1939-83	.96	.71	--		--	
4. Annual totals with circulation lagged one year behind	1939-83	.95	.59	--		--	
5. Median index with circulation lagged one year behind	1939-83	--	--	.93/9.3		.59/24.3	
6. Mean index	1970, 1974-84	--	--	.88/4.7		.85/14.5	
7. Gross index	1970, 1974-84	--	--	.76/7.9		.83/15.5	
Part A2. Public Library Current Operating Expenditures							
1. Annual totals	1939, 1945 1950-83	.96	.79	--		--	
2. Median index	1939, 1945 1950-83	--	--	.96/38		.79/22	
3. Median index after correction for inflation	1939, 1945 1950-83	--	--	.95/15		.60/20	
4. Mean index	1970, 1974-84	--	--	.93/22		.83/15	
5. Gross index	1970, 1974-84	--	--	.94/20		.80/13	

Notes: Columes e and g are coefficients of Pearson product moment correlations; columns f and h are average annual differences between index numbers.

In our data covering 45 years, the correlation between estimated annual total US public library circulation and US unemployment is .62 with the 95% confidence interval from .39 to .78 (line 3 of Table 13); the correlation between the index numbers for these two variables is .65 (.44-.79). These correlations are significantly greater than zero, but that between circulation and employment is .95 and between their index numbers .93. Furthermore the annual average difference between the index numbers for circulation and unemployment is 23, while that between circulation and employment is less than 9 (9). The coefficient of correlation between US adult circulation and US employment, over the same 45 years, is .96, and between adult circulation and unemployment .71, using annual totals in both cases.

It may be that unemployment does not affect circulation immediately. When we correlated the index numbers for circulation and unemployment with the former lagged one year behind the latter, the resulting coefficient is .59. Clearly the time factor is not the answer. There is no change in the correlation coefficient when circulation is compared with employment with a one-year lag between the former and the latter--whether we use raw totals or index numbers.

If circulation fluctuates more closely with employment than with unemployment, and if there is no time lag in that relationship, then it should be possible to calculate the line of regression and be able to predict the circulation index value for a given year from the employment index value of that year--and to do so more accurately than from the regression of unemployment on circulation. Since the plot of unemployment is clearly concave and not linear, we used the formula for a second degree polynomial,

$Y = a+B_1(X)+B_2(X^2)$ (footnote 10). After we calculated the values for X = employment ($Y=-75.6805+2.77285X - 0.009608X^2$) and X = unemployment ($Y=41.486+0.55739X - 0.0006883X^2$), we then used the 1983 index value of US employment and got an estimated index value of 107 for 1983 circulation--which is exactly right. When we used the 1983 unemployment index for X, we got a value of 106 for Y, which is not far off. However when 1984 data for all three variables were available, the calculated index of circulation was 109; the estimate from the 1984 employment index was 110, and from the 1984 unemployment index 96.

We have complete data for all the libraries in the US index sample for 1970 and 1974-84. We were thus able to construct Table M which shows the mean, median and gross index values of US public library circulation for these 12 years, as well as the index values of US employment and unemployment. When we calculate the average annual difference between each type of circulation index with the employment and unemployment figures, we get these results:

Type of Circulation Index	Employment	Unemployment
Mean	4.7	14.5
Median	5.7	16.4
Gross	7.9	15.5

Employment agrees with all three measures of circulation twice as well as does unemployment. The mean index value of circulation is better than either the median or the gross index.

Table M. Three Measures of the Index of US Public Library Circulation, and US Employment and Unemployment Indexes (1980=100).

Year	Index of Circulations Mean	Median	Gross	Employment	Unemployment
1970	85	89	91	79	54
1974	85	89	95	87	68
1975	91	98	95	86	104
1976	94	99	97	89	97
1977	93	99	96	93	92
1978	95	99	97	97	81
1979	95	97	94	100	80
1980	100	100	100	100	100
1981	105	104	105	101	108
1982	107	107	110	100	140
1983	111	107	116	102	140
1984	113	109	119	106	113

When we used the same formula ($Y = a+B_1X+B_2X^2$ with X = the number of years) to project the trend, we predicted that the index number for US public library circulation in 1984 would be 113, when in fact it was 109--an error of 3.7%. When we used annual circulation totals, the prediction for 1984 was 1,154,150,000 or 20,150,000 (1.8%) more than the amount estimated from the 1982 NCES survey by the percent change in the US Index from 1982 to 1984.

Employment or umemployment is not the only factor which affects circulation; the number of new books and other materials added each year is probably the single most important internal influence on circulation. The closest measure to that, in this study, is the number of dollars spent for library materials. The coefficient of correlation between total US public library circulation and the number of dollars spent for library materials, for the 22 years from 1962-83, is .94. The same correlations for public libraries in England and Wales over 24 years is .91, and for public libraries in Canada over 33 years is .86. Between 1974 and 1983, the average correlation for the sample of libraries of the US Index, between circulation

and expenditures for materials, was .96 and the range .91 to .98. In 1983 the correlation between circulation per capita and expenditures per capita for library materials was .80, and between circulation per capita in 1984 and expenditures per capita for materials in 1983 also .80.

The correlation between Canadian public library circulation and employment over 35 years is .98 (line 29 of Table 13), and that between circulation and unemployment .86. The annual average difference between index numbers is 10.6 and 12.9 respectively. In the case of England and Wales, the correlation between circulation and employment over 25 years is .62, between circulation and unemployment .68, and the respective annual average differences between index numbers 21 and 40. The association between circulation and employment is lower in these two countries than in the US, and is much closer to the association between circulation and unemployment than in the US; but employment is at least as good a barometer of circulation there as is umemployment.

The formula for the regression of the index of Canadian employment on the index of Canadian public library circulation is $Y = -92.712561 + 3.021107X - 0.010812X^2$, and that of unemployment on circulation is $Y=60156.545045 - 2467.080625X + 18.264942X^2$. When we substitute the 1983 index of Canadian employment (100.7) for X_1 the index of circulation for 1983 is 101.2 compared with the actual index of 113.5; when we use the 1983 index of unemployment (167), the calculated index of circulation is 115.0 compared with the actual index of 122.0.

Somewhat the same situation as between circulation and employment is found in the correlations between public library expenditures and employment/unemployment. In the US, the correlations with employment over 36 years

are .95 (even when expenditures are corrected for inflation) and with unemployment .60 (deflated) and .79 (for index values); the annual average differences between index numbers are 38 and 15 (deflated), and 22 and 20 respectively. In Canada, for 35 years, the correlations between expenditures and employment are .90-.99, and between expenditures and unemployment .91-.92; the annual average differences between index numbers are 41 and 26, and 25 and 12. In England and Wales, employment over 36 years correlates much lower with expenditures than does unemployment: .21 and .48 (with expenditures deflated) compared with .92 and .67; the annual average differences between index numbers are 69 and 36, and 20 and 29. Employment is a better barometer of expenditures than is unemployment in the US; they are about equal in Canada; and unemployment is better in England and Wales.

Correlations between the estimates of total US public library circulation and expenditures, and the comparable figures from the American Library Directory--over 25 years--are .96 and .99 with the annual average differences between index numbers 2.1 and 7.3. In Canada, over 15 years, they are also uniformly high (.99), with the annual average difference only 3. The correlation between the estimates of total US public library expenditures and the data reported by the US Census Bureau over 31 years are .99, with the annual average difference between index numbers 1.6; the correlations between ALD and USCB data on expenditures--over 25 years--are also .99, but the average annual difference between index numbers is 6.9.

Finally, Part D of Table 13 has a number of comparisons between variables of different countries. Thus, the estimates of total public library circulation in the US correlate .99 with those of Canada and .97 with those of England and Wales, and the latter two countries correlate with each other

at .96; the annual average differences between index numbers are 19, 6, and 21. The comparable correlations in regard to expenditures are .98 and .94 (deflated), .98 and .99, and .99 and .98; 10 and 24, 10 and 5, and 2 and 18. It appears that, over the 19 to 35 years so covered, the trends in public library circulation and expenditures are much the same in these three countries.

Finally, we explored the relationship between the number of books (and other materials) loaned each year by American public libraries and the number of books bought by consumers. Table N shows that in recent years the total number of books of all kinds bought by consumers has increased from 25% more than the number of books loaned in 1975 to over 60% in 1982. The rate of increase of loans has been higher in recent years than that of purchases.

Table N. Comparisons Between the Number of Items Loaned by US Public Libraries and the Number of Books Bought by US Consumers: 1975-82.

(a)	(b)	(c)	(d)	(e)	(f)
	Circulation		Books Bought		
Year	Total (000,000's)	Index No. (1980=100)	Total (000,000's)	Index No. (1980=100)	d÷b
1975	980	101.3	1245	73.5	127
1976	990	102.4	1348	79.6	136
1977	987	102.1	1514	89.4	153
1978	987	102.1	1608	94.9	163
1979	967	100	1644	97.0	170
1980	967	100	1694	100	175
1981	1037	107.2	1742	102.8	168
1982	1067	110.3	1736	102.5	163

Sources: The data in col. b come from Table 2, col. c; and those in col. d from John P. Dessauer, "US Consumer Expenditures in Books" from each edition of the Bowker Annual from 1977 to 1984. Each of Dessauer's reports has data for two years, and we have used the later figure for each year. Somewhat different figures are reported by Dessauer in Book Industry Trends (Book Industry Study Group/Bowker, 1978, 1979, 1983) and in "Book Industry Economics in 1982," Publishers Weekly Yearbook (Bowker, 1983) p. 99.

REFERENCES

(1) Herbert Goldhor, "The Indices of American Public Library Statistics," Illinois Libraries 58 (Feb. 1976) pp. 152-58.

(2) Tables with Arabic numbers are in the Appendix; those identified by letters are in the text.

(3) American Libraries 6 (1975) p. 379; 7 (1976) p. 454; 8 (1977) p. 391; 9 (1978) p. 483; 10 (1979) p. 487; 11 (1980) p. 448; 12 (1981) p. 469; 13 (1982) p. 458; 14 (1983) p. 534; 15 (1984) p. 526; and 16 (1985) p. 484.

(4) National Center for Education Statistics, Survey of Public Libraries, LIBGIS I: 1974 (NCES 77-200; GPO, 1978) pp. 46-47 and 66; and Statistics of Public Libraries: 1977-1978 (NCES 82-204; GPO, 1982) p. 118 and 125; and Robert A. Heintze, "A Survey of Public Libraries 1982," Public Libraries 24 (Summer 1985) pp. 58-60. The 1982 data were seen too late to be incorporated into all the tables in this report.

(5) When we compared the estimates for 1977-81 based on the 1974 and on the 1977 NCES surveys, the differences (in terms of percentages of the estimates using the 1974 value) were minor in the case of circulation--an average of 0.4% over the five years, and relatively small in the case of expenditures--an average of 2.4%. When we estimated the 1977 total US circulation, starting with the 1974 figure, the result was 0.4% different from what the 1977 survey reported; and in expenditures, it was 1.9% different. When we estimated the 1982 total US circulation, starting with the 1977

figure, the result was 4.2% less than the unpublished total supplied by NCES from its 1981/82 survey; and in expenditures, it was 4.7% less.

(6) "The Index of Illinois Public Library Circulation," Illinois Libraries 35 (1953) p. 131.

(7) See for example Thomas Ballard, Knowin' All Them Things That Ain't So: Managing Today's Public Library (Occasional Papers no. 168; University of Illinois Graduate School of Library and Information Science, March 1985) p. 8.

(8) Stephen E. James, "An Investigation of the Relationship Between Public Library Use Patterns and Local Economic Conditions in Twenty Urban Areas: 1960-1979," (Ph.D. thesis, University of Wisconsin-Madison, 1983) 257 p.

(9) Powell found in a recent national study that whether a person worked for 20 or more hours a week was one of two demographic variables most closely related to use of the public library in the previous year. Ronald R. Powell, et al., "Childhood Socialization: Its Effect on Adult Library Use and Adult Reading," Library Quarterly 54 (1984) p. 260.

(10) See John J. Clark and Margaret T. Clark, A Statistics Primer for Managers (Free Press, 1983) p. 153.

Table 1. Index of American Public Library Circulation and Expenditures (1980=100): 1939-1983.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
			Operating Expenditures			
	Circulation			% for		
Year	Index Value	% Adult	Index Value	Salaries/ Materials/ Other	Consumer Price Index	Expends. Index Deflated
1939	53	67%	3	--/--/--	16.8	18
1940	52	69%	--		--	--
1941	47	66%				
1942	42	64%				
1943	39	64%				
1944	39	62%	--		--	--
1945	39	62%	4		21.8	18
1946	40	62%	--		--	--
1947	40	58%				
1948	40	58%	--			
1949	43	55%	--		--	--
1950	45	56%	6		29.2	21
1951	46	56%	9		31.5	29
1952	47	51%	10		32.2	31
1953	49	51%	10		32.4	31
1954	53	50%	11		32.6	34
1955	54	50%	12		32.5	37
1956	58	50%	13		33.0	39
1957	61	49%	14		34.2	41
1958	66	49%	15		35.1	43
1959	68	50%	16		35.3	45
1960	71	50%	17		35.9	47
1961	76	51%	18	--	36.3	50
1962	79	49%	20	70/16/14	36.7	54
1963	79	50%	21	69/15/16	37.2	56
1964	82	48%	23	70/14/16	37.6	61
1965	83	49%	24	65/13/22	38.3	63
1966	80	50%	26	70/15/15	39.4	66
1967	82	50%	30	70/15/15	40.5	74
1968	86	51%	34	68/15/17	42.2	81
1969	88	56%	37	67/17/16	44.5	83
1970	89	61%	41	66/19/15	47.1	87
1971	92	63%	45	64/18/18	49.1	92
1972	89	65%	48	65/19/16	50.7	95
1973	88	66%	54	68/17/15	53.9	100

Table 1, p. 2.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
			Operating Expenditures			
	Circulation			% for		
Year	Index Value	% Adult	Index Value	Salaries/ Materials/ Other	Consumer Price Index	Expends. Index Deflated
1974	89	67%	57	67/17/16	59.8	95
1975	98	66%	63	65/17/18	65.3	96
1976	99	68%	71	67/17/16	69.0	103
1977	99	68%	78	67/17/16	73.5	106
1978	99	68%	85	68/16/16	79.1	107
1979	97	69%	89	68/16/16	88.1	101
1980	100	69%	100	65/15/20	100.0	100
1981	104	70%	111	67/14/19	110.2	100
1982	107	69%	121	64/15/21	116.8	104
1983	107	68%	130	66/14/20	120.4	108

Notes:

Columns b-e: Sources are Herbert Goldhor, "The Indices of American Public Library Statistics," Illinois Libraries 58 (February 1976) p. 152-58; American Libraries 7 (1976) p. 454, 8 (1977) p. 391, 9 (1978) p. 483, 10 (1979) p. 487, 11 (1980) p. 448, 12 (1981) p. 469, 13 (1982) p. 458, 14 (1983) p. 534, and 15 (1984) p. 526. The originally published index numbers of circulation and expenditures (columns b and e here) have been converted to 1980 base as shown in Table 1a here. The expenditure index values for 1939, 1945 and 1950 are derived from column b of Table 3.

Col. f: Consumer Price Index (1980=100); from Table 5 here.

Col. g: Expenditures Index in Constant Dollars (1980=100). Column d divided by column f.

Table 1a. Linkage of Published Index Values into One Series.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Index of Circulation				Index of Expenditures		
	1939	1960	1970	1980	1960	1970	1980
Year	=100	=100	=100	=100	=100	=100	=100
1939	100	73	59	53	--	--	--
1940	98	72	58	52			
1941	90	66	53	47			
1942	80	59	47	42			
1943	75	55	44	39			
1944	75	55	44	39			
1945	75	55	44	39			
1946	76	56	45	40			
1947	76	56	45	40			
1948	76	56	45	40			
1949	82	60	48	43			
1950	85	62	50	45	--	--	--
1951	86	63	51	46	49	21	9
1952	89	66	53	47	55	24	10
1953	92	68	55	49	59	25	10
1954	102	74	59	53	63	27	11
1955	103	76	61	54	69	30	12
1956	110	81	65	58	72	31	13
1957	114	85	68	61	80	34	14
1958	119	82	74	66	86	37	15
1959	125	95	76	68	93	40	16
1960	127	100	80	71	100	43	17
1961	124	106	85	76	105	45	18
1962	--	107	88	79	112	48	20
1963		110	89	79	123	51	21
1964		116	92	82	134	56	23
1965		117	93	83	145	60	24
1966		114	90	80	151	65	26
1967		112	92	82	163	75	30
1968		107	96	86	182	83	34
1969		--	98	88	--	90	37
1970			100	89		100	41
1971			103	92		111	45
1972			100	89		117	48
1973			98	88		133	54
1974			100	89		141	57
1975			110	98		156	63
1976			111	99		175	71
1977			111	99		192	78
1978			111	99		209	85

Table 1a, p. 2.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Index of Circulation				Index of Expenditures		
	1939	1960	1970	1980	1960	1970	1980
Year	=100	=100	=100	=100	=100	=100	=100
1979			109	97		220	89
1980			112	100		246	100
1981			116	104		275	111
1982			--	107		--	121
1983				107			130

Notes:

The underline in columns c-e and g-h indicates the point at which the new series was calculated from the reports of the sample libraries. Above that line, the values from the previous series was linked to the new one by using the ratio of the first year of overlap. Thus column b was linked to column c by the formula "63 (the 1951 value for column c) is to 86 (the 1951 value for column b) as X is to 85 (the 1950 value of column b), and X = 62 for 1950 in column c." For the 1949 value of column c, 63:86 = X:82, and X = 60, etc.

The original sources of the published data are ALA Bulletin 43 (1949) p. 334-35, 44 (1950) p. 87, 45 (1951) p. 101, 46 (1952) p. 186, 47 (1953) p. 172, 48 (1954) p. 254, 49 (1955) p. 298, 50 (1956) p. 292, 51 (1957) p. 640, 52 (1958) p. 502, 53 (1959) p. 702, 54 (1960) p. 477, 55 (1961) p. 646, 56 (1962) p. 474, 57 (1963) p. 435, 58 (1964) p. 711, 59 (1965) p. 401, 60 (1966) p. 347, 61 (1967) p. 557, 62 (1968) p. 492, and 63 (1969) p. 556.

American Libraries 4 (1973) p. 294.

Illinois Libraries 56 (1974) p. 582.

American Libraries 6 (1975) p. 379, 7 (1976) p. 454, 8 (1977) p. 391, 9 (1978) p. 483, 10 (1979) p. 487, 11 (1980) p. 448, 12 (1981) p. 469, 13 (1982) p. 458, 14 (1983) p. 534, and 15 (1984) p. 526.

The last previous published compilation of index numbers appeared in Illinois Libraries 58 (1976) p. 152-58, but the converted circulation index values for 1939-60 were apparently in error by an average of 2.5 points.

Table 2. Total US Public Library Circulation and Total US Population, Employment and Unemployment: 1939-83.

(a) Year	(b) USOE/ NCES (000's)	(c) Est. Total Circulation (000's)	(d) ALD Circulation (000,000's)	(e) Percent AF/ANF/J or Ad/J	(f) Total US Population (000,000's)	(g) Population Served/ % of col. f
1939	415,924	--	--	46/21/33	130.9	79.1/60.4%
1940		(387,225)		48/21/31	132.5	(81.4/61.4)
1941		(358,526)		44/22/34	133.7	(83.6/62.5)
1942		(336,694)		43/21/36	134.6	(85.5/63.5)
1943		(333,365)		42/22/36	135.1	(87.3/64.6)
1944		(333,365)		40/22/38	133.9	(87.8/65.6)
1945	333,365	--		40/22/38	133.4	88.8/66.6
1946		(341,366)		39/23/38	140.7	(96.2/68.4)
1947		(342,602)		35/23/42	144.1	(101.2/70.2)
1948		(342,602)		34/24/42	146.7	(105.8/72.1)
1949		(376,529)		32/23/45	149.3	(110.3/73.9)
1950	384,606	--		31/25/44	151.9	115.0/75.7
1951		(392,683)		30/26/44	154.0	(115.0/74.7)
1952		(409,221)		27/24/49	156.4	(115.4/73.8)
1953		(429,175)		27/24/49	159.0	(115.8/72.8)
1954		(457,946)		26/24/50	161.9	(116.4/71.9)
1955		(474,426)		27/23/50	165.1	(117.2/71.0)
1956	499,396	--		26/24/50	168.1	117.6/70.0
1957		(515,876)	--	25/24/51	171.2	(120.5/70.4)
1958		(557,825)	--	24/25/51	174.1	(123.4/70.9)
1959		(582,795)	(668.6)	24/26/50	177.1	(126.3/71.3)
1960		(599,275)	696.3	24/26/50	180.0	(129.2/71.8)
1961		(632,735)	(724.0)	24/27/49	183.0	(132.1/72.2)
1962		(657,705)	(751.0)	24/25/51	185.8	(135.1/72.7)
1963		(657,705)	779.2	22/28/50	188.5	(137.8/73.1)
1964		(682,674)	(804.8)	21/27/52	191.1	(140.6/73.6)
1965		(761,849)	830.4	22/27/51	193.5	(143.2/74.0)
1966		(802,676)	(826.3)	23/27/50	195.6	(145.7/74.5)
1967		(822,319)	822.2	23/27/50	197.5	(147.9/74.9)
1968		(862,497)	(834.3)	23/28/49	199.4	(150.3/75.4)
1969		(883,033)	846.4	56/44	201.4	(152.7/75.8)
1970		(892,854)	(872.3)	61/39	204.0	(155.7/76.3)
1971		(923,211)	898.2	63/37	206.8	(158.6/76.7)
1972		(892,854)	(893.0)	65/35	209.3	(161.6/77.2)
1973		(883,033)	887.9	66/34	211.4	(164.0/77.6)
1974	892,854	--	(908.6)	67/33	213.3	166.4/78.0
1975		(979,940)	929.3	32/34/34	215.5	(174.6/81.0)
1976		(989,784)	(946.0)	68/32	217.6	(182.8/84.0)
1977	986,715	--	963.3	68/32	219.8	(191.2/87.0)
1978		(986,715)	969.6	68/32	222.1	(199.9/90.0)
1979		(966,981)	965.6	69/31	224.6	(208.9/93.0)
1980		(966,582)	1004.6	69/31	226.5	(217.3/95.9)
1981		(1,037,037)	1035.8	70/30	229.3	(220.3/96.0)
1982		(1,066,639)	1057.5	69/31	231.5	(222.7/96.2)
1983		(1,070,000)	1088.4	34/34/32	233.7	(225.2/96.4)

Table 2, p. 2.

(a) Year	(h) Circulation Per Capita	(i) Total Employment (000's)	(j) Total Employment Index Values	(k) Total Unemployment (000's)	(l) Total Unemployment Index Values
1939	5.3	45,750	46.1	9480	124.1
1940	4.8	47,520	47.9	8120	106.3
1941	4.3	50,350	50.7	5560	72.8
1942	3.9	53,750	54.1	2660	34.8
1943	3.8	54,470	54.9	1070	14.0
1944	3.8	53,960	54.3	670	8.8
1945	3.8	53,820	53.2	1040	13.6
1946	3.8	55,250	55.6	2270	29.7
1947	3.5	57,038	57.4	2311	30.3
1948	3.4	58,343	58.8	2276	29.8
1949	3.4	57,561	58.1	3637	47.6
1950	3.3	58,918	59.3	3288	43.1
1951	3.4	59,961	60.4	2055	26.9
1952	3.5	60,250	60.7	1883	24.7
1953	3.7	61,179	61.6	1834	24.0
1954	3.9	60,109	60.5	3532	46.2
1955	4.0	62,170	62.6	2852	37.3
1956	4.2	63,799	64.2	2750	36.0
1957	4.3	64,071	64.5	2859	37.4
1958	4.4	63,036	63.5	4602	60.3
1959	4.6	64,630	65.1	3740	49.0
1960	4.6	65,778	66.2	3852	50.4
1961	4.8	65,746	66.2	4714	61.7
1962	4.9	66,702	67.2	3911	51.2
1963	4.8	67,762	68.2	4070	53.3
1964	4.9	69,305	69.8	3786	49.6
1965	5.3	71,088	71.6	3366	44.1
1966	5.0	72,895	73.4	2875	37.6
1967	5.6	74,372	74.9	2975	39.0
1968	5.7	75,920	76.5	2817	36.9
1969	5.8	77,902	78.4	2832	37.1
1970	5.7	78,678	79.2	4093	53.6
1971	5.9	79,367	79.9	5016	65.7
1972	5.5	82,153	82.7	4882	63.9
1973	5.4	85,064	85.7	4365	57.2
1974	5.4	86,794	87.4	5156	67.5
1975	5.6	85,846	86.4	7929	103.8
1976	5.4	88,752	89.4	7406	97.0
1977	5.2	92,017	92.7	6991	91.5
1978	4.9	96,048	96.7	6202	81.2
1979	4.6	98,824	99.5	6137	80.4
1980	4.6	99,303	100.0	7637	100.0
1981	4.7	100,397	101.1	8273	108.3
1982	4.8	99,526	100.2	10,678	139.8
1983	4.8	100,833	101.5	10,717	140.3

Table 2, p. 3.

Notes:

Figures in parentheses are estimates.

Column b: "US Office of Education/National Center for Education Statistics Surveys (000's)." Sources for column b and for underlined years 1939, 1945, 1950, 1956 and 1974 of column g are:

Ralph M. Dunbar and Emery M. Foster, Public Library Statistics: 1938-39 (US Office of Education Bulletin 1942, no. 4; GPO, 1942), p. 4-5.

Willard O. Mishoff and Emery M. Foster, Public Library Statistics: 1944-45 (US Office of Education Bulletin 1947, no. 12; GPO, 1947) p. 9, 12, and 15.

Public Library Statistics: 1950 (US Office of Education Bulletin 1953, no. 9; GPO, 1953) p. 10, 13, and 43.

Rose Vainstein, et al., Statistics of Public Libraries: 1955-56 (Biennial Survey of Education in the United States: 1954-56, Chapter 5; GPO, 1959) p. 14, 43, 68, and 70.

Helen M Eckard, Survey of Public Libraries, LIBGIS I: 1974 (NCES 77-200; GPO, 1977) p. 46-47, 55, and 66.

Helen Eckard, Statistics of Public Libraries: 1977-1978 (NCES 82-204; GPO, 1982) p. 115, and 125.

Column c: "Total US Circulation" was calculated in this way: The data in column b were used as basing points, and from each such year we found the percent change in the Index of American Public Library Circulation and applied that to the figure in column b for the nearest basing point. For example, the US Index of Circulation in 1939 was 58 and in 1940 54; 4 is 6.9% of 58 and 6.9% of 415,924,000 is 28,699,000. Subtracting the latter from the former leaves 387,225,000, the estimated total circulation for 1940. In the one or two years midway between any two basing points, we overlapped the estimates from the two directions and averaged them. Thus the estimated total circulation for 1942 was 315,686,000 working from 1939 and 357,701,000 working from 1945; their average is 336,694,000.

Column d source is Table 5 here.

Column e: "Percent of Adult Fiction/Adult Nonfiction/Juvenile or Adult/Juvenile" for the sample of libraries used in the preparation of the Index of American Public Library Circulation. Source: Herbert Goldhor, "The Indices of American Public Library Statistics," Illinois Libraries 58 (Feb. 1976) p. 156-57, and Table 1 here. The data for 1983 come from p. 7 above.

Table 2, p. 4.

Column f source is Statistical Abstract: 1981, p. 5, Table 2 "resident population," supplemented by US Bureau of the Census, "Estimates of the Population of the United States to October 1, 1983," (Current Population Reports: Population Estimates and Projections, Series P-25, No. 941; GPO, November 1983), "resident population" as of July 1 (but April 1, 1980).

Column g "Population Served (000,000's)/Percent of Total US Population (col. f)." For 1939, 1945, 1950, 1956 and 1974, the population served by all US public libraries is given in the sources for column b here. For 1980 and 1982, this figure was obtained by adding the number of persons reported as served by public libraries in 50 states and the District of Columbia, in the American Library Directory for 1980 (34th ed.) and 1982 (36th ed.). The percent of total population served in each of these 7 base years was subtracted from that of the next base year, and the difference distributed evenly over the number of intervening years. These percentages were then applied to the total population figure in column f. For 1983, we added the same increase over 1982 (0.2%) as 1982 had over 1981.

Columns i and k: Sources for 1939-46, US Bureau of Labor Statistics, Employment and Earnings 22 (April 1976) p. 18; Table A-1, "Employment Status of the Non-Institutional Population, 1929 to Date," specifically Civilian Labor Force -- number employed and number unemployed. For 1947-82, US President, Economic Report (GPO, 1983), Table B-30, "Civilian Employment and Unemployment by Sex and Age, 1947-82," specifically Civilian Employment-Total, and Unemployment-Total. For 1983, Employment and Earnings 31 (Jan. 1984) p. 164, adding full-time and part-time labor force.

Table 3. Total US Public Library Operating Expenditures: 1939-1983

(a) Year	(b) USOE/ NCES (000's)	(c) Est. Total Expenditures (000's)	(d) ALD Expenditures (000,000's)	(e) % for Salaries/ Materials/ Other	(f) Expends. Per Person Served
1939	$ 48,832	--	--	62/22/16	$ 0.62
1945	61,790	--		67/20/13	0.70
1950	109,777	--		66/18/15	0.95
1951		($109,770)		--	0.95
1952		(121,954)			1.06
1953		(126,428)			1.09
1954		(144,009)			1.24
1955		(157,116)		--	1.34
1956	170,223	--		68/18/14	1.45
1957		(183,330)	--	--	1.52
1958		(196,437)	$ 250.6	--	1.59
1959		(209,545)	(261.4)		1.66
1960		(222,652)	271.1		1.72
1961		(235,759)	(301.0)	--	1.78
1962		(261,803)	(331.0)	70/16/14	1.94
1963		(274,910)	360.9	69/15/16	1.99
1964		(301,124)	(403.8)	70/14/16	2.14
1965		(371,593)	446.6	65/13/22	2.59
1966		(464,616)	(492.0)	70/15/15	3.19
1967		(535,938)	593.4	70/15/15	3.62
1968		(607,261)	(597.8)	68/15/17	4.04
1969		(661,262)	656.2	67/17/16	4.33
1970		(732,585)	(739.0)	66/19/15	4.71
1971		(803,907)	821.7	64/18/18	5.07
1972		(857,909)	(874.6)	65/19/16	5.31
1973		(964,893)	927.5	68/17/15	5.88
1974	1,018,894	--	(1040.6)	67/17/16	6.12
1975		(1,125,878)	1153.6	65/17/18	6.45
1976		(1,237,264)	(1252.4)	67/17/16	6.77
1977	1,359,631	--	1351.1	67/17/16	7.11
1978		(1,481,998)	1477.7	68/16/16	7.41
1979		(1,551,339)	1583.2	68/16/16	7.43
1980		(1,743,047)	1534.1	65/15/20	8.02
1981		(1,917,080)	1917.7	67/14/19	8.70
1982		(2,108,788)	2086.5	64/15/21	9.47
1983		(2,266,505)	2248.8	66/14/20	10.06

Table 3, p. 2.

(a) Year	(g) Expenditures Per Loan	(h) Expenditures Per Loan Deflated	(i) Expenditures Per Person Deflated	(j) US Census Bureau (000,000's)	(k) Index Nos. for j
1939	$ 0.12	$ 0.71	$ 3.67	--	--
1945	0.19	0.87	3.21	--	--
1950	0.29	0.99	3.25	--	--
1951	0.28	0.89	3.02	--	--
1952	0.30	0.93	3.29	$ 118.2	7.0
1953	0.29	0.90	3.36	(132.6)	7.8
1954	0.31	0.95	3.80	147.0	8.7
1955	0.33	1.02	4.12	(173.1)	10.2
1956	0.34	1.03	4.39	199.2	11.8
1957	0.36	1.05	4.44	211.9	12.5
1958	0.35	1.00	4.53	238.6	14.1
1959	0.36	1.02	4.69	258.8	15.3
1960	0.37	1.03	4.79	278.0	16.4
1961	0.37	1.02	4.90	368.0	21.7
1962	0.40	1.09	5.29	340.0	20.1
1963	0.42	1.13	5.35	399.0	23.6
1964	0.44	1.17	5.69	401.0	23.7
1965	0.49	1.28	6.76	444.0	26.2
1966	0.58	1.47	8.10	486.0	28.7
1967	0.65	1.60	8.94	535.0	31.6
1968	0.70	1.66	9.57	573.0	33.8
1969	0.75	1.69	9.73	634.0	37.4
1970	0.82	1.74	10.00	700.0	41.3
1971	0.87	1.77	10.33	761.0	44.9
1972	0.96	1.89	10.45	814.0	48.1
1973	1.09	2.02	10.91	877.0	51.8
1974	1.14	1.91	10.23	968.0	57.2
1975	1.15	1.76	9.88	1119.0	66.1
1976	1.25	1.81	9.81	1249.0	73.7
1977	1.38	1.88	9.67	1259.0	74.3
1978	1.50	1.89	9.36	1362.0	80.4
1979	1.60	1.82	8.43	1504.7	88.8
1980	1.80	1.80	8.02	1693.6	100.0
1981	1.85	1.68	7.88	1865.2	110.1
1982	1.98	1.69	8.10	1994.8	117.8
1983	2.12	1.76	8.36	2213.2	130.7

Table 3, p. 3.

Notes:

Figures in parentheses are estimates.

Column b: "US Office of Education/National Center for Education Statistics Surveys (000's)." Sources are those for column b of Table 2 here.

Column c: "Total Operating Expenditures of All US Public Libraries (000's), Estimated from Data in column b and from the Index of American Public Library Expenditures (column d of Table 2)." The procedure for making these estimates is described in the note to column c of Table 2.

Column d: "Total Operating Expenditures of All US Public Libraries (000,000's), Computed from the State Summaries in the American Library Directory." Source is Table 4 here.

Column e: "Percent of Total Operating Expenditures (columns b and c) Which Went for Salaries/Library Materials/All Other Costs." Figures underlined are from the sources for column b; all other data are from Herbert Goldhor, "The Indices of American Public Library Statistics," Illinois Libraries 58 (Feb. 1976) p. 154, and Table 1 here. The percentage composition of operating expenditures in 1974 is given by NCES (see sources of column b of Table 2) as 58/18/24, and in 1977 as 58/16/26; but in both cases the salaries of building maintenance staff are included in "other," while in 1939-56 and 1962-83 they are included with salaries of other employees.

Column f: Total operating expenditures (columns b and c) divided by total population served (column g of Table 2).

Column g: Total operating expenditures (columns b and c) divided by total circulation of all US public libraries (columns b and c of Table 2).

Column h: Expenditures per loan (column g) divided by the Consumer Price Index (from Table 5 here).

Column i: Expenditures per person served (column f) divided by the Consumer Price Index (from Table 5 here)

Column j: "Total Operating Expenditures of All US Public Libraries from US Census Bureau Reports." The figures for 1953 and 1955 were derived by interpolation. Data for 1960-83 are from US Bureau of the Census, Government Finances (GPO), Table 12 or 13; and for 1952, 1954, and 1956-59 from US Bureau of the Census, Historical Statistics on Governmental Finances and Employment (1977 Census of Governments, v. 6-Topical Studies, no. 4; GPO, 1979) Table 6, "Finances of Local Governments: 1902 to 1976-77." These latter data include expenditures only of local governments, and for column j above they were increased by 6.5%--the difference between the two sources of data in 1960 and in 1977. Somewhat different figures for 1972 and 1977 are found in US Bureau of the Census, 1972 Census of Governments, v. 4 Governmental Finances, no. 5, pp. 76-126, and in 1977 Census of Governments, v. 4 Governmental Finances, no. 5 Compendium of Governmental Finances, Table 8, p. 28.

Column k: Index numbers for data in column j, with 1980=100.

Table 4. Comparison of the ALD Annual Totals of US Public Library Circulation and Expenditures with the Published Index Values

Part A. Circulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	ALD		From ALD					
	Edition	Two Largest	Total	Index	US Index		Difference	
Year	Number	Years of Data*	(000,000's)	Value	Original	Adjusted	e-f	e-g
1958	22	1958/64% 67%						
		1959/32% 33%	--- (a)	---	---	---	---	---
1959	---	---	(668.6)	(67)	70	---	-3	---
1960	23	1960/54% 57%	696.3	69	72	74	-3	-5
	---	1961/40% 43%						
1961	---	---	(724.0)	(72)	76	---	-4	---
1962	---	---	(751.0)	(75)	79	---	-4	---
1963	24	1962/21% 21%						
		1963/77% 79%	779.2	78	79	79	-1	-1
1964	---	---	(804.8)	(80)	82	---	-2	---
1965	25	1964/20% 20%						
		1965/78% 80%	830.4	83	83	83	0	0
1966	---	---	(826.3)	(82)	80	---	+2	---
1967	26	1966/16% 16%						
		1967/84% 84%	822.2	82	82	82	0	0
1968	---	---	(834.3)	(83)	86	---	-3	---
1969	27	1968/12% 12%						
		1969/86% 88%	846.4	84	88	88	-4	-4
1970	---	---	(872.3)	(87)	89	---	-2	---
1971	28	1970/14% 14%						
		1971/86% 86%	898.2	89	92	92	-3	-3
1972	---	---	(893.0)	(89)	89	---	0	---
1973	29	1972/24% 26%						
		1973/67% 74%	887.9	88	88	88	0	0
1974	---	---	(908.6)	(90)	89	---	+1	---
1975	30	1974/24% 25%						
		1975/71% 75%	929.3	93	98	96	-5	-3
1976	---	---	(946.0)	(94)	99	---	-5	---
1977	31	1976/33% 35%						
		1977/61% 65%	963.3	96	99	99	-3	-3
1978	32	1977/20% 22%						
		1978/73% 78%	969.6	97	99	99	-2	-2
1979	33	1978/22% 22%						
		1979/78% 78%	965.6	96	97	97	-1	-1
1980	34	1979/16% 17%						
		1980/76% 83%	1004.6	100	100	100	---	---
1981	35	1980/22% 24%						
		1981/69% 76%	1035.7	103	104	103	-1	0
1982	36	1981/29% 32%						
		1982/61% 68%	1057.5	105	107	106	-2	-1
1983	37	1982/41% 42%						
		1983/57% 58%	1088.4	108	107	107	1	1

Table 4, p. 2.

Part B. Expenditures

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	ALD		From ALD					
	Edition	Two Largest	Total	Index	US Index		Difference	
Year	Number	Years of Data*	(000,000's)	Value	Original	Adjusted	e-f	e-g
1958	22	(See Part A.)	$250.6	16	15	15	+1	+1
1959	---		(261.4)	(17)	16	---	+1	---
1960	23		271.1	18	17	17	+1	+1
1961	---		(301.0)	(20)	18	---	+2	---
1962	---		(331.0)	(22)	20	---	+2	---
1963	24		360.9	24	21	21	+3	+3
1964	---		(403.8)	(26)	23	---	+3	---
1965	25		446.6	29	24	24	+5	+5
1966	---		(493.0)	(32)	26	---	+6	---
1967	26		539.4	35	30	29	+5	+6
1968	---		(597.8)	(39)	34	---	+5	---
1969	27		656.2	43	37	37	+6	+6
1970	---		(739.0)	(48)	41	---	+7	---
1971	28		821.7	54	45	44	+9	+10
1972	---		(874.6)	(57)	48	---	+9	---
1973	29		927.5	60	54	52	+6	+8
1974	---		(1040.6)	(68)	67	---	+1	---
1975	30		1153.6	75	63	64	+12	+11
1976	---		(1252.4)	(82)	71	---	+11	---
1977	31		1351.5	88	78	76	+10	+12
1978	32		1477.7	96	85	84	+11	+12
1979	33		1583.2	103	89	88	+14	+15
1980	34		1534.1	100	100	98	---	+2
1981	35		1917.7	125	110	108	+15	+17
1982	36		2086.5	136	121	118	+15	+18
1983	37		2248.8	147	130	126	17	21

Notes:

*Column c consists of three parts. First are the two years with the largest percentages of data in the ALD edition in question. Second are the percentages for each of these two years; they total over 90% in every case, average 96%, and are 100% in three cases. Third are these same two percentages converted into percentages totaling 100%, so as to apply these to the index values in column f.

The values in parentheses in columns d and e are estimated by interpolation.

(a) There were so many gaps in the state totals of circulation that it was deemed unwise to use the data from this edition.

Column g consists of index values adjusted from those shown in column f by the application of the second set of percentages of column c. The intent was to make the values of column g more nearly comparable to those of column e.

Table 5. U.S. Consumer Price Index: 1939-1983.

Year	1967 = 100	1980 = 100
1939	41.6	16.8
1945	53.9	21.8
1950	72.1	29.2
1951	77.8	31.5
1952	79.5	32.2
1953	80.1	32.4
1954	80.5	32.6
1955	80.2	32.5
1956	81.4	33.0
1957	84.3	34.2
1958	86.6	35.1
1959	87.3	35.3
1960	88.7	35.9
1961	89.6	36.3
1962	90.6	36.7
1963	91.7	37.2
1964	92.9	37.6
1965	94.5	38.3
1966	97.2	39.4
1967	100.0	40.5
1968	104.2	42.2
1969	109.8	44.5
1970	116.3	47.1
1971	121.3	49.1
1972	125.3	50.7
1973	133.1	53.9
1974	147.7	59.8
1975	161.2	65.3
1976	170.5	69.0
1977	181.5	73.5
1978	195.3	79.1
1979	217.7	88.1
1980	247.0	100.0
1981	272.3	110.2
1982	288.6	116.8
1983	297.4	120.4

Sources: For 1939 and 1945, U.S. Bureau of Labor Statistics, Handbook of Labor Statistics (GPO, 1972) p. 277. For 1950-66, Monthly Labor Review 96 (January 1973) p. 104. For 1967-83, Monthly Labor Review 107 (May 1984) p. 77.

Table 6. Circulation and Related Data for Public Libraries in England and Wales: 1939-83.

(a) Year	(b) Total Circulation (000's)	(c) Index Nos. for b	(d) Ad/J or AF/ANF/J	(e) Population (000's)	(f) Loans Per Capita	(g) Total Civil Employment (000's)	(h) Index Nos. for g	(i) Unemployed (000's)	(j) Index Nos. for i
1939	239,799	40.3		47,762	5.0	14,418	59.3	1480	102.5
...									
1947	285,007	48.0		49,571	5.7	15,432	63.5	498	34.5
1948	284,247	47.8		50,065	5.7	20,401	83.9	331	22.9
1949	312,000	52.5		50,363	6.2	20,444	84.1	338	23.4
1950	306,100	51.5		50,616	6.0	22,560	92.8	298	20.6
1951	314,100	52.9		50,225	6.3	22,768	93.7	207	14.3
1952	340,900	57.4		50,444	6.8	22,710	93.4	336	23.3
1953	359,700	60.5	60/18/22	50,611	7.1	22,833	93.9	311	21.5
1954	370,605	62.4	--	50,784	7.3	23,193	95.4	254	17.6
1955	386,300	65.0	59/20/20	50,968	7.6	23,489	96.6	210	14.5
1956	398,730	67.1	57/23/20	51,184	7.8	23,747	97.7	215	14.9
1957	419,428	70.6	53/24/23	51,430	8.2	23,835	98.1	276	19.1
1958	431,779	72.7	--	51,652	8.4	23,658	97.3	406	28.1
1959	397,000	66.8		51,956	7.6	23,779	97.8	420	29.1
1960	440,095	74.1		53,372	8.2	24,257	99.8	326	22.6
1961	441,534	74.3		52,807	8.4	24,585	101.1	287	19.9
1962	--	--		--	--	--	--	--	--
1963				--		--	--	--	--
1964				47,219		24,527	100.9	317	22.0
1965				47,540		24,770	101.9	270	18.7
1966				47,824		24,913	102.5	253	17.5
1967				48,113		24,509	100.8	466	32.3
1968				48,346		24,326	100.1	506	35.0
1969				48,540		23,931	98.5	483	33.4
1970				48,680		23,825	98.0	524	36.3
1971				48,854		23,490	96.6	687	47.6
1972				49,026		23,582	97.0	741	51.3
1973				49,154		24,151	99.4	529	36.6
1974	--	--	--	49,159	--	24,232	99.7	502	34.8
1975	541,491	91.1	57/25/18	49,157	11.0	24,146	99.3	803	55.6
1976	569,338	95.8	57/25/17	49,142	11.6	23,936	98.5	1215	84.1
1977	564,517	95.0	58/26/16	49,120	11.5	23,969	98.6	1303	90.2
1978	576,665	97.1	58/26/16	49,117	11.7	24,116	99.2	1282	88.8
1979	581,568	97.9	58/25/16	49,171	11.8	24,429	100.5	1175	81.4
1980	594,194	100.0	59/25/16	49,244	12.1	24,306	100.0	1444	100.0
1981	591,021	99.5	60/24/16	49,634	11.9	23,289	95.8	2299	159.2
1982	590,338	99.4	60/25/15	49,607	11.9	22,928	94.3	2664	184.5
1983	592,008	99.6	59/26/15	49,654	11.9	22,894	94.2	2984	206.6

Table 6, p. 2.

Notes:

Column a: In each case, the data shown are for the year beginning on April 1 of the previous year and ending on March 31 of the year shown.

Column b sources: For 1938/39, from Library Association Record 49 (Dec. 1947) p. 317. The published figure for 1939 included lending and reference issues; in 1946/47, the latter were 3.3% of the total, and so 3.3% were deducted to give the 1939 figure shown. For all other years, only lending library issues were counted.

For 1946/47-1960/61, from Library Association Record 49 (1947) p. 316-17; 51 (Jan. 1949) p. 24-25; 52 (Jan. 1950) p. 14-15; 53 (Nov. 1951) p. 368-69; 54 (Nov. 1952) p. 370-71; 57 (Jan. 1955) p. 30-31 and (Dec. 1955) p. 484-85; 58 (Dec. 1956) p. 480-81; 59 (Dec. 1957) p. 404-05; 60 (Dec. 1958) p. 374-75; 63 (Feb. 1961) p. 52-53; 62 (Jan. 1960) p. 18-19; 64 (Feb. 1962) p. 58-59. The data from 1948/49-1960/61 were also reprinted as Statistics of Public (Rate-Supported) Libraries in Great Britain and Northern Ireland (London: Library Association, 1954-1962). Note that these data and for 1938/39 are for England, Wales, Scotland and Northern Ireland; for the same years, the data in columns e, g and i are also for all of the United Kingdom. Beginning in 1958/59, the published circulation totals do not include the loan of books to schools. The figures shown above in this table for 1949-1961 are the published totals including estimates of circulation and expenditures for nonrespondents.

For 1974/75-1982/83, from Chartered Institute of Public Finance and Accountancy, Public Library Statistics (year) Actuals (London: The Institute, 1976-1984). Data for these years are for only England and Wales, and this is true for the figures for these years in columns e, g and i. Loans of discs, tapes and cassettes were added to loans of books and specifically to adult nonfiction. Data for these years are for respondents only.

Column d: "Adult/Juvenile or Adult Fiction/Adult Nonfiction/Juvenile." For sources, see notes to column b. For 1974/75 to date, adult nonfiction includes loans of discs, tapes and cassettes. The percentage of total circulation was calculated for those libraries which provided such figures (accounting for 69% of the circulation of all respondents in 1974/75 to 76% in 1982/83); it is assumed that these percentages would apply to the total loans of those libraries not so reporting.

Column e sources: For 1939 and 1947-50, Central Statistical Office, Annual Abstract of Statistics: 1939-1950 (No. 88; HMSO, 1952) p. 7. For 1951-55, Central Statistical Office, Annual Abstract of Statistics (No. 99; HMSO, 1962) p. 7. For 1956-82, Central Statistical Office, Annual Abstract of Statistics (No. 120: London, HMSO, 1984) p. 6. For 1983, Office of Population Censuses and Surveys, OPCS Monitor (May 8, 1984) p. 1.

For 1939, 1947-61, the population shown is that for all of the United Kingdom; for 1964-83, the population shown is that for England and Wales. This was done to match the data in column b. For practical purposes, we are using the total population as the population served; from 1947-61 the population served (including nonrespondents) averaged 99.4% of the total population, and from 1975-83, 99.1%.

Table 6, p. 3.

Column f: Number of loans per capita, or column b divided by column e.

Column g sources: For 1939-68, Department of Employment and Productivity, British Labour Sources: Historical Abstract 1886-1968 (HMSO, 1971) p. 218-20; for 1969-71, Central Statistical Office, Annual Abstract of Statistics (No. 116, 1980) p. 146; for 1972-82, Annual Abstract of Statistics (No. 120, 1984) p. 109; and for 1983, Department of Employment, Employment Gazette 93 (April 1984) p. S10. The figures for 1939 and 1947-61 are for the United Kingdom, to match the data in columns b, e and i; for 1964-83, they are for Great Britain which is the closest we could come to match the data in column b. In all cases, military forces are omitted.

Column h: This column provides index numbers (with 1980 equal to 100) for column g, "Total Civil Employment."

Column i sources are the same as for column g. For 1939 and 1947-61 the data are for the United Kingdom and match those in columns b, e and g; for 1964-83 they are for Great Britain which is the closest we could come to match the figures in column b.

Column j: This column provides index numbers (with 1980 equal to 100) for column i, "Unemployed."

Table 7. Current Operating Expenditures and Related Data for Public Libraries in England and Wales: 1939-83.

(a) Year	(b) Total Expends. (000's)	(c) Salaries/ Materials/ Other	(d) Index Nos. for b	(e) UK Price Index	(f) d : e	(g) Expends. per Circ	(h) g : e	(i) Expends. Per Capita	(j) i : e
1939	£ 3,178	--/--/--	1.3	8.8	14.8	£ 1.33	£ 0.15	£ 0.07	£ 0.80
...									
1947	5,648	--/(30)/--	2.4	11.3	21.2	1.98	0.18	0.11	0.97
1948	6,710	--/(31)/--	2.8	11.9	23.5	2.36	0.20	0.13	1.09
1949	7,705	--/(32)/--	3.2	12.3	26.0	2.47	0.20	0.15	1.22
1950	8,653	--/(32)/--	3.6	12.7	28.3	2.83	0.22	0.17	1.34
1951	9,130	--/(32)/--	3.8	13.8	27.5	2.91	0.21	0.18	1.30
1952	10,373	--/(32)/--	4.3	15.1	28.5	3.04	0.20	0.21	1.39
1953	11,184	--/(33)/--	4.7	15.5	30.3	3.11	0.20	0.22	1.42
1954	11,804	--/(33)/--	4.9	15.8	31.0	3.19	0.20	0.23	1.46
1955	12,810	48/32/21	5.4	16.6	32.5	3.32	0.20	0.25	1.51
1956	13,870	48/32/20	5.8	17.3	33.5	3.48	0.20	0.27	1.56
1957	15,906	48/31/21	6.6	17.9	36.9	3.79	0.21	0.31	1.73
1958	17,537	48/32/20	7.3	18.5	39.5	4.06	0.22	0.34	1.85
1959	18,773	40/32/28	7.8	18.6	41.9	4.73	0.25	0.36	1.95
1960	20,496	--/(32)/--	8.6	18.7	46.0	4.66	0.25	0.38	2.03
1961	22,276	--/(32)/--	9.3	19.4	47.9	5.05	0.26	0.42	2.16
1962	--	--/--/--	--	20.1	--	--	--	--	--
1963	--	--/--/--	--	20.5	--	--	--	--	--
1964	25,859	48/29/23	10.8	21.2	50.9	--	--	0.55	2.59
1965	(29,538)	(48/29/24)	12.3	22.1	55.7	--	--	0.62	2.81
1966	33,217	47/29/24	13.9	23.0	60.4	--	--	0.69	3.00
1967	37,000	47/29/24	15.5	23.6	65.7	--	--	0.77	3.26
1968	41,383	48/28/24	17.3	24.7	70.0	--	--	0.86	3.48
1969	45,000	48/27/25	18.8	26.1	72.0	--	--	0.93	3.56
1970	49,185	48/27/26	20.6	27.7	74.4	--	--	1.01	3.65
1971	57,016	49/25/25	23.8	30.3	78.5	--	--	1.17	3.86
1972	66,364	49/25/26	27.7	32.5	85.2	--	--	1.35	4.15
1973	76,647	49/25/26	32.0	35.5	90.1	--	--	1.56	4.39
1974	(88,170)	(49/24/27)	36.8	41.1	89.5	--	--	1.79	4.36
1975	112,855	52/21/27	47.1	51.1	92.2	20.84	0.41	2.30	4.50
1976	148,884	53/20/28	62.2	59.6	104.4	26.15	0.44	3.03	5.08
1977	168,168	53/19/28	70.3	69.0	101.9	29.79	0.43	3.42	4.96
1978	184,528	53/20/27	77.1	74.7	103.2	32.00	0.43	3.76	5.03
1979	204,665	52/21/27	85.5	84.8	100.8	35.19	0.41	4.16	4.91
1980	239,367	52/20/28	100.0	100.0	100.0	40.28	0.40	4.86	4.86
1981	276,173	53/18/29	115.4	111.9	103.1	46.73	0.42	5.56	4.97
1982	305,440	54/18/28	127.6	121.5	105.0	51.74	0.43	6.16	5.07
1983	332,855	53/18/28	139.1	125.0	111.3	56.22	0.45	6.71	5.37

Table 7, p. 2

(a)	(k)	(l)	(m)	(n)	(o)	(p)
	Dollars Per	Expends. in US$ Total	Index	Expends. Per Capita	Deflated & in US$	Expends. Per Circ Deflated & in US$
Year	Pound	(000's)	Nos.	in US$		
1939	$4.44	$ 14,110	2.5	$0.30	$ 3.41	$0.67
...						
1947	4.03	22,761	4.1	0.44	3.91	0.73
1948	4.03	27,041	4.8	0.52	4.39	0.81
1949	3.69	28,431	5.1	0.55	4.50	0.74
1950	2.80	24,228	4.3	0.48	3.75	0.62
1951	2.80	25,564	4.6	0.50	3.64	0.59
1952	2.79	28,941	5.2	0.59	3.88	0.56
1953	2.81	31,427	5.6	0.62	3.99	0.56
1954	2.81	33,169	5.9	0.65	4.10	0.56
1955	2.79	35,740	6.4	0.70	4.21	0.56
1956	2.80	38,836	7.0	0.76	4.37	0.56
1957	2.79	44,378	8.0	0.86	4.83	0.59
1958	2.81	49,279	8.8	0.96	5.20	0.62
1959	2.81	52,752	9.5	1.01	5.48	0.70
1960	2.81	57,594	10.3	1.07	5.70	0.70
1961	2.80	62,373	11.2	1.18	6.05	0.73
1962	2.81	--	--	--	--	--
1963	2.80	--	--	--	--	--
1964	2.79	72,147	12.9	1.53	7.23	--
1965	2.80	82,706	14.8	1.74	7.87	--
1966	2.79	92,675	16.6	1.93	8.37	--
1967	2.75	101,750	18.2	2.12	8.97	--
1968	2.39	98,305	17.6	2.06	8.32	--
1969	2.39	107,550	19.3	2.22	8.51	--
1970	2.40	118,044	21.2	2.42	8.76	--
1971	2.44	139,119	24.9	2.85	9.42	--
1972	2.50	165,910	29.7	3.38	10.38	--
1973	2.45	187,785	33.7	3.82	10.76	--
1974	2.34	206,318	37.0	4.19	10.20	--
1975	2.22	250,538	44.9	5.11	9.99	0.91
1976	1.80	267,991	48.1	5.45	9.14	0.79
1977	1.74	292,612	52.5	5.95	8.63	0.75
1978	1.92	354,294	63.5	7.22	9.66	0.83
1979	2.12	433,890	77.8	8.82	10.41	0.87
1980	2.33	557,725	100.0	11.32	11.32	0.93
1981	2.02	557,869	100.0	11.23	10.04	0.85
1982	1.75	534,520	95.8	10.78	8.87	0.75
1983	1.52	505,940	90.7	10.20	8.16	0.68

Table 7, p. 3.

Notes:

Figures in parentheses are estimates.

Column a: In each case, the data shown are for the year beginning on April 1 of the previous year and ending on March 31 of the year shown.

Column b: Total Operating Expenditures in thousands of pounds. The sources are the same for column b of Table 6, except that the data for expenditures from 1963/64 to date are from Chartered Institute of Public Finance and Accountancy, Public Library Statistics. The figure for 1964/65 was obtained by interpolation, and that for 1973/74 by extrapolation from the data provided by 188 public library authorities to all 369. The figures for 1939 and 1947-61 in column b of this table are for public libraries in the United Kingdom, those for 1964-83 are for public libraries in England and Wales.

Column c: Percentage distribution of total current operating expenditures for salaries, for library materials (including binding), and for all other costs. The sources are the same as for column b. For 1946/47-1953/54 and 1959/60-1961/62, only the percentage for the purchase of books was recorded. In 1954/55-1958/59, the average percent of total expenditures devoted to binding was 7.3; so 7.3% was added to the percentage for books in the 8 earlier and 2 later years. The percentage breakdown for 1974/75 is estimated by interpolation.

Column d: Index Numbers for Column b, with 1980 = 100.

Column e: UK Consumer Price Index; data come from Table 8 here.

Column f: Index numbers for column b, corrected for inflation. The figures in this column were found by dividing each value in column d by the corresponding figure in column e.

Column g: Current operating expenditures per circulation, in pounds. Found by dividing column b of this table by the total annual circulation, in column b of Table 6.

Column h: Current operating expenditures per circulation, in pounds--corrected for inflation. Found by dividing each value in column g by the corresponding figure in column e.

Column i: Current Operating Expenditures for Public Libraries in England and Wales (in Pounds) Per Capita. Found by dividing column b of this table by column e of Table 6.

Column j: Current Operating Expenditures for Public Libraries in England and Wales (in Pounds) Per Capita--corrected for inflation. Found by dividing column i by column e.

Table 7, p. 4.

Column k: Annual Average Exchange Rate in Dollars per Pound. Sources: for 1939-40, Board of Governors of the Federal Reserve System, Banking and Monetary Statistics: 1914-1940 (1943) p. 681; for 1941-69, Banking and Monetary Statistics: 1941-1970 (1976) p. 1046-47, with the "free" rate used for 1941-45; for 1970-79, Annual Statistical Digest: 1970-1979 (1981) p. 443; for 1980, the Federal Reserve Bulletin 69 (Mar. 1983) p. A68; and for 1981-83, the Federal Reserve Bulletin 70 (June 1984) p. A64.

Column l: Total Expenditures in Pounds (column b) Converted to US Dollars (000's). Column b times column k.

Column m: Index numbers for column l (1980=100).

Column n: Expenditures Per Capita in Pounds (column g) Converted to US Dollars. Column g times column k.

Column o: Expenditures Per Capita in Pounds Corrected for Inflation (column j) and Converted to US Dollars. Column j times column k.

Column p: Expenditures Per Circulation in Pounds Corrected for Inflation (column h) and Converted to US Dollars. Column h times column k.

Table 8. United Kingdom Indexes of Retail Prices: 1939-83.

(a) Year	(b) 7/14=100	(c) 6/17/47=100	(d) 1/17/56=100	(e) 1/16/62=100	(f) 1/74=100	(g) 1980=100
1939	158	79.0	51.7	44.4	23.1	8.8
...						
1947	203.3	101.6	66.5	57.1	29.8	11.3
1948		107.7	70.5	60.5	31.5	11.9
1949		110.7	72.5	62.2	32.4	12.3
1950		114.1	74.7	64.1	33.4	12.7
1951		124.5	81.5	69.9	36.4	13.8
1952		135.9	89.0	76.4	39.8	15.1
1953		140.1	91.7	78.7	41.0	15.5
1954		142.7	93.4	80.1	41.7	15.8
1955		149.1	97.6	83.8	43.7	16.6
1956		(155.8)	102.0	87.5	45.6	17.3
1957			105.8	90.8	47.3	17.9
1958			109.0	93.5	48.7	18.5
1959			109.6	94.0	49.0	18.6
1960			110.7	95.0	49.5	18.7
1961			114.5	98.3	51.1	19.4
1962			(118.4)	101.6	52.9	20.1
1963				103.6	54.0	20.5
1964				107.0	55.8	21.2
1965				112.1	58.4	22.1
1966				116.5	60.7	23.0
1967				119.4	62.2	23.6
1968				125.0	65.1	24.7
1969				131.8	68.7	26.1
1970				140.2	73.1	27.7
1971				153.4	80.0	30.3
1972				164.3	85.6	32.5
1973				179.4	93.5	35.5
1974				208.2	108.5	41.1
1975					134.8	51.1
1976					157.1	59.6
1977					182.0	69.0
1978					197.1	74.7
1979					223.5	84.8
1980					263.7	100.0
1981					295.0	111.9
1982					320.4	121.5
1983					(329.6)	(125.0)

Table 8, p. 2.

Notes:

Numbers in parentheses are estimates.

Columns b and c source: Great Britain Department of Employment and Productivity, British Labour Statistics: Historical Abstract 1886-1968 (HMSO, 1971) Table 89, "Cost of Living Index August 1914-June 1947," p. 166; Table 90, "Interim Index of Retail Prices June 1947-January 1952," p. 172; and Table 91, "Interim Index of Retail Prices January 1952-January 1956," p. 173. The data for 1947 are given monthly for January to June and average 203.3, and are given monthly for July to December and average 101.6. We assume that for practical purposes the two index numbers can be used for the whole year. We linked the two series by the formula 203.3 : 101.6 = 158 : x and 203.3x = 16,052.8, and x = 79.0 for 1939.

Column d source: Ibid., Table 93, "General Index of Retail Prices... 1956-1961," p. 176. In column c we estimated the index value for 1956 by calculating the percent difference between the value for 1954 and 1955 (4.5%) and adding that much more to the value for 1955 (149.1 + 6.7 = 155.8). We then linked the two series by the formula 155.8 : 102 = 149.1:x, and 155.8x = 15,208.2, and x = 97.6 for 1955, etc.

Column e source: Ibid., Table 94, "General Index of Retail Prices... 1962-1968," p. 177. We estimated the 1962 index value at 118.5 by finding the percentage increase from 1960 to 1961 (3.4%) and adding that much more to the value for 1961 (114.5 x .034 = 3.9, and 114.5 + 3.9 = 118.4). We then linked the two series by the formula 118.4 : 101.6 = 114.5 : x, and 118.4x = 11,633.2, and x = 98.3 for 1961, etc. For 1969-74, Great Britain, Central Statistical Office, Annual Abstract of Statistics (No. 119; HMSO, 1983) Table 18.5, "Index of Retail Prices."

Column f source: Great Britain, Central Statistical Office, Annual Abstract of Statistics (No. 119, HMSO, 1983) Table 18.5, "Index of Retail Prices" (1966-81). Table 18.5 gives the 1974 index twice, 208.2 with January 16, 1962 = 100, and 108.5 with January 15, 1974 = 100. We could thus link the two series by the formula 208.2 : 108.5 = 179.4 : x, and 208.2x = 19,464.9, and x = 93.5 for 1973, etc. For 1982-83, Great Britain, Central Statistical Office, Monthly Digest of Statistics no. 445 (November 1983) Table 18.3, "General Index of Retail Prices (All Items)," p. 111 (for 1962-1982) and Table 18.1, "General Index of Retail Prices," p. 108 (for January-October 1983).

Table 9. Canadian Public Library Circulation: 1939-1983

(a) Year	(b) Total Circulation (000's)	(c) Circulation Index	(d) Population Served (000's)	(e) Circulation Per Capita (b ÷ d)	(f) ALD Circulation (000,000's)	(g) ALD Circulation Index
1939	20,717	16.3	--	--	--	--
1941	20,294	16.0	--	--	--	--
1943	20,056	15.8	--	--	--	--
1945	20,016	15.8	--	--	--	--
1947	19,721	15.5	--	--	--	--
1949	22,624	17.8	--	--	--	--
1951	25,241	19.9	--	--	--	--
1953	30,947	24.3	8,116	3.8	--	--
1956	35,799	28.2	9,818	3.7	38.1	31.2
1957	41,939	33.0	10,126	4.1	--	--
1958	45,879	36.2	10,454	4.4	--	--
1959	50,098	39.5	10,569	4.7	--	--
1960	56,187	44.3	12,422	4.5	45.3	37.1
1961	60,268	47.5	(12,709)	4.7	--	--
1962	65,144	51.3	12,996	5.0	69.1	56.6
1963	70,418	55.5	13,237	5.3	--	--
1964	76,178	60.0	13,394	5.7	--	--
1965	78,289	61.7	14,103	5.6	78.3	64.1
1966	80,824	63.7	15,592	5.2	--	--
1967	81,789	64.5	16,100	5.1	81.5	66.7
1968	88,586	69.8	15,654	5.6	--	--
1969	92,910	73.2	16,089	5.8	91.4	74.9
1970	96,324	75.9	16,511	5.8	--	--
1971	97,337	76.7	16,946	5.7	97.1	79.5
1972	95,657	75.4	17,436	5.5	95.5	78.2
1973	99,334	78.3	17,951	5.5	--	--
1974	101,032	79.6	18,536	5.5	--	--
1975	108,044	85.1	19,132	5.7	--	--
1976	112,240	88.4	19,601	5.8	100.9	82.6
1977	114,648	90.4	20,139	5.7	111.6	91.4
1978	116,173	91.6	20,640	5.6	111.2	91.1
1979	121,545	95.7	21,216	5.7	114.8	94.0
1980	126,903	100.0	21,796	5.8	122.1	100.0
1981	131,797	103.9	22,378	5.9	126.0	103.2
1982	143,983	113.5	22,974	6.3	129.6	106.1
1983	154,808	122.0	23,541	6.6	143.2	117.3

Table 9, p. 2

Year	(h) Percent Adult Fiction/ Adult Nonfiction/Juvenile	(i) Total Civilian Employment (000's)	(j) Total Civilian Unemployment (000's)	(k) Employment Index	(l) Unemployment Index
1939	51/20/29	4,120	529	38.7	61.0
1941	50/20/30	4,271	195	40.1	22.5
1943	48/19/33	4,491	76	42.1	8.8
1945	46/19/34	4,447	73	41.7	8.4
1947	43/21/35	4,832	110	45.3	12.7
1949	39/21/40	4,913	141	46.1	16.3
1951	38/20/42	5,097	126	47.8	14.5
1953	38/18/44	5,235	162	49.1	18.7
1956	38/15/47	5,585	197	52.4	22.7
1957	54/46	5,731	278	53.8	32.1
1958		5,706	432	53.6	49.8
1959		5,870	372	55.1	42.9
1960		5,965	446	56.0	51.4
1961		6,055	466	56.8	53.7
1962		6,225	390	58.4	45.0
1963		6,375	374	59.8	43.1
1964		6,609	324	62.0	37.4
1965		6,862	280	64.4	32.3
1966		7,152	267	67.1	30.8
1967		7,379	315	69.3	36.3
1968		7,537	382	70.7	44.1
1969		7,780	382	73.0	44.1
1970		7,879	495	73.9	57.1
1971		8,079	552	75.8	63.7
1972		8,329	562	78.2	64.8
1973		8,759	520	82.2	60.0
1974		9,137	525	85.8	60.6
1975		9,308	707	87.4	81.5
1976		9,479	727	89.0	83.9
1977		9,648	850	90.5	98.0
1978		9,972	911	93.6	105.1
1979		10,369	838	97.3	96.7
1980		10,655	867	100.0	100.0
1981		10,933	898	102.6	103.6
1982		10,644	1314	99.9	151.6
1983		10,734	1448	100.7	167.0

Table 9, p. 3

Notes:

Columns b and h: Data for 1939-58 are from Canada, Dominion Bureau of Statistics, Survey of Libraries in Canada, 1938-40 ... 1957-58; for 1959-78 from Statistics Canada, Culture Statistics: Public Libraries in Canada-1959 ... 1978 (catalogue no. 87-651); for 1969, from the Canadian Year Book: 1971; for 1979-81 from Statistics Canada, Culture Statistics: Public Libraries in Canada: 1979-1981 (catalogue no.87-514; Dec. 1983; and for 1982 and 1983 by letter from Library Surveys branch of Statistics Canada.

Column d: The original sources are the same as for column b, except that total population figures for 1975-76 are from the Canadian Year Book: 1978-79, p. 325; for 1977-78 from the Canadian Year Book: 1980-81, p. 656; and for 1982-83 from the Canadian Statistical Review 59 (May 1984) p. 14. From 1970, the total population was reduced to the population served by spreading evenly over the years 1970-80 (at the rate of 1.336% peryear) the difference between the percent of total population which was served in 1969 (75.9%) and in 1980 (90.6%). The latter percentage was found by adding up the provincial figures on total population and the population served, for 1980, from the 34th and 35th editions of the American Library Directory (Bowker, 1981 and 1982). For 1981-83, we added 1.336% to 90.6% for each year, and multiplied the result against the total population of Canada.

Column f source is Table 12 here.

Columns i and j: Data for 1939-45 are from M.C. Urquhart and K.A.H. Buckley, eds., Historical Statistics of Canada (Toronto: Macmillan, 1965), Table Series C47-55, cols. 51 and 54, p. 61; for 1946-75 from F. H. Leacy, ed., Historical Statistics of Canada (2d ed., 1983), Table 158, cols. 139 and 142, p. D134-159; for 1976-78 from Statistics Canada, Canadian Year Book 1980-81, p. 269; and for 1979-83 from Canadian Statistical Review 57 (Jan. 1982) p. 44-45, 58 (July 1983) p. 44-45, and 59 (May 1984) pp. 44-45. The two editions of Historical Statistics of Canada overlap, and do not completely agree; the later figures have been used in all such cases.

Table 10. Canadian Public Library Operating Expenditures: 1939-83

(a) Year	(b) Expenditures (000's)	(c) Percent Salaries/ Materials/ Other	(d) Expenditures Index	(e) Expenditures Per Capita	(f) ALD Expenditures (000's)
1939	$ 2,056	54/24/22	0.8	--	--
1941	2,085	57/25/18	0.8	--	--
1943	2,388	56/26/18	0.9	--	--
1945	2,764	57/24/19	1.1	--	--
1947	3,738	55/27/19	1.5	--	--
1949	4,853	55/24/21	1.9	--	--
1951	6,218	57/22/21	2.4	--	--
1953	7,811	58/22/20	3.1	$ 0.96	--
1956	10,273	53/21/26	4.0	1.05	$ 11,659
1957	12,360	60/16/24	4.9	1.22	--
1958	13,318	62/18/20	5.2	1.27	--
1959	15,156	66/19/15	6.0	1.43	--
1960	17,354	62/19/19	6.8	1.40	18,522
1961	19,348	63/19/19	7.6	1.52	--
1962	21,931	63/18/19	8.6	1.69	23,269
1963	24,188	62/18/20	9.5	1.83	--
1964	27,012	60/20/20	10.6	2.02	--
1965	30,023	58/19/22	11.8	2.13	28,544
1966	34,859	59/20/21	13.7	2.24	--
1967	41,154	60/18/22	16.2	2.56	42,710
1968	46,844	61/18/21	18.5	2.99	--
1969	(51,867)	--	20.4	3.22	52,791
1970	62,162	60/20/20	24.5	3.76	--
1971	70,617	61/19/20	27.8	4.17	67,483
1972	78,040	64/19/17	35.0	4.48	85,101
1973	88,800	64/18/18	35.0	4.95	--
1974	107,913	61/19/20	42.5	5.82	--
1975	132,172	62/17/21	52.0	6.91	--
1976	156,635	62/17/21	61.7	8.06	118,617
1977	174,066	64/17/19	68.6	8.64	161,799
1978	198,778	63/17/19	78.3	9.63	195,240
1979	219,852	62/18/20	86.6	10.36	214,227
1980	253,854	62/18/20	100.0	11.65	252,267
1981	294,762	63/17/20	116.1	13.17	282,935
1982	345,103	--	135.9	15.02	322,978
1983	406,695	--	160.2	17.28	369,256

Table 10, p. 2

(a) Year	(g) ALD Expenditures Index	(h) Cost of Living Index	(i) Expenditures Index Deflated	(j) Expenditures Per Capita Deflated	(k) Expenditures Per Circulation	(l) Expenditures Per Circulation Deflated
1939	--	17.4	4.6	--	$ 0.10	$ 0.57
1941	--	19.1	4.2	--	0.10	0.52
1943	--	20.5	4.4	--	0.12	0.59
1945	--	20.6	5.3	--	0.14	0.68
1947	--	23.4	6.4	--	0.19	0.81
1949	--	27.6	6.9	--	0.21	0.76
1951	--	31.3	7.7	--	0.25	0.80
1953	--	31.8	9.7	$ 3.02	0.25	0.79
1956	4.6	32.5	12.3	3.23	0.29	0.89
1957	--	33.5	14.6	3.64	0.29	0.87
1958	--	34.4	15.1	3.69	0.29	0.84
1959	--	34.9	17.2	4.10	0.30	0.86
1960	7.3	35.2	19.3	3.98	0.31	0.88
1961	--	35.5	21.4	4.28	0.32	0.90
1962	9.2	36.0	23.9	4.69	0.34	0.94
1963	--	36.7	25.9	4.99	0.34	0.93
1964	--	37.3	28.4	5.42	0.35	0.94
1965	11.3	38.2	30.9	5.58	0.38	0.99
1966	--	39.6	34.6	5.66	0.43	1.09
1967	16.9	41.1	39.4	6.23	0.50	1.22
1968	--	42.7	43.3	7.00	0.53	1.24
1969	20.9	44.7	45.6	7.20	0.56	1.25
1970	--	46.1	53.1	8.16	0.65	1.41
1971	26.8	47.5	58.5	8.78	0.73	1.54
1972	33.7	49.7	61.8	9.01	0.82	1.65
1973	--	53.5	65.4	9.23	0.89	1.66
1974	--	59.4	71.5	9.80	1.07	1.80
1975	--	65.8	79.0	10.50	1.22	1.85
1976	47.0	70.8	87.1	11.38	1.40	1.98
1977	64.1	76.4	89.8	11.31	1.52	1.99
1978	77.4	83.1	94.2	11.59	1.71	2.06
1979	84.9	90.8	95.4	11.41	1.81	1.99
1980	100.0	100.0	100.0	11.65	2.00	2.00
1981	112.2	112.5	103.2	11.71	2.24	1.99
1982	128.0	124.6	109.1	12.05	2.40	1.93
1983	146.4	131.8	121.5	13.11	2.63	2.00

Table 10, p. 3

(a)	(m)	(n)	(o)	(p)	(q)	(r)
	US$ Per	Expends. in US$ Total	Index	Expends. Per Capita	Deflated	Expends. Per Circ Deflated
Year	Can$	(000's)	Nos.	in US$	& in US$	& in US$
1939	$0.96	$ 1,974	0.9	--	--	$0.55
1941	0.87	1,814	0.8	--	--	0.47
1943	0.90	2,149	1.0	--	--	0.52
1945	0.90	2,488	1.2	--	--	0.60
1947	0.92	3,439	1.6	--	--	0.75
1949	0.93	4,513	2.1	--	--	0.72
1951	0.95	5,907	2.7	--	--	0.75
1953	1.02	7,967	3.7	$ 0.98	$ 3.08	0.81
1956	1.02	10,478	4.9	1.07	3.29	0.91
1957	1.04	12,854	6.0	1.27	3.79	0.90
1958	1.03	13,718	6.4	1.31	3.80	0.87
1959	1.04	15,762	7.3	1.49	4.26	0.89
1960	1.03	17,875	8.3	1.44	4.10	0.91
1961	0.99	19,155	8.9	1.50	4.24	0.89
1962	0.94	20,615	9.6	1.59	4.41	0.88
1963	0.93	22,495	10.4	1.70	4.64	0.86
1964	0.93	25,121	11.6	1.88	5.04	0.87
1965	0.93	27,921	12.9	1.98	5.19	0.92
1966	0.93	32,419	15.5	2.08	5.26	1.01
1967	0.93	38,273	17.7	2.38	5.79	1.13
1968	0.93	43,565	20.2	2.78	6.51	1.15
1969	0.93	48,236	22.4	2.99	6.70	1.16
1970	0.96	59,676	27.7	3.61	7.83	1.35
1971	0.99	69,912	32.4	4.13	8.69	1.52
1972	1.01	78,820	36.5	4.52	9.82	1.67
1973	1.00	88,800	41.2	4.95	9.23	1.66
1974	1.02	110,071	51.0	5.94	10.00	1.84
1975	0.98	129,529	60.0	6.77	10.29	1.81
1976	1.01	158,201	73.3	8.14	11.49	2.00
1977	0.94	163,622	75.8	8.12	10.63	1.87
1978	0.88	174,925	81.1	8.47	10.20	1.81
1979	0.85	186,874	86.6	8.81	9.70	1.69
1980	0.85	215,776	100.0	9.90	9.90	1.70
1981	0.83	244,652	113.4	10.93	9.72	1.65
1982	0.81	279,533	129.5	12.17	9.76	1.56
1983	0.81	329,423	152.7	14.00	10.62	1.62

Table 10, p. 4.

Notes:

Numbers in parentheses are estimates.

Column b: Total Current Operating Expenditures. Sources are the same as for column b of Table 9.

Column c: Percentage Distribution of Expenditures by Salaries, Library Materials (including binding) and all Other Costs of Operation. Salaries include wages of building staff. In 1941, wages of building staff were 25.9% of other expenditures; this percent was applied to other expenditures in 1939 and added to library staff materials. Sources of column c are the same as for column b.

Column d: Expenditures Index with 1980=100.

Column e: Expenditures Per Capita. Column b divided by column d of Table 9.

Column f: Data are from Table 11 here.

Column h: Data are from Table 12 here.

Column i: Column d divided by column h.

Column j: Column e divided by column h.

Column k: Column b of this table divided by column b of Table 9.

Column l: Column k divided by column h.

Column m: Annual Average Exchange Rate in US Dollars Per Canadian Dollar. Sources: For 1939, Board of Governors of the Federal Reserve System, Banking and Monetary Statistics: 1914-1940 (1943) p. 665; for 1941-69, Banking and Monetary Statistics: 1941-1970 (1976) p. 1036-37, with the "free" rate used for 1941-49; for 1970-79, Annual Statistical Digest: 1970-1979 (1981) p. 442-43; for 1980, the Federal Reserve Bulletin 69 (Mar. 1983) p. A68; and for 1981-83, the Federal Reserve Bulletin 70 (June 1984) p. A64. The figures for 1980-83 were converted from Canadian dollars per US dollar to US dollars per Canadian dollar.

Column n: Total Operating Expenditures in US Dollars (000's). Column b times column m.

Column o: Index Numbers (1980=100) for column n.

Column p: Operating Expenditures Per Capita in US Dollars. Column e times column m.

Column q: Operating Expenditures Per Capita Deflated and in US Dollars. Column j times column m.

Column r: Operating Expenditures Per Circulation Deflated and in US Dollars. Column l times column m.

Table 11. Canadian Public Library Circulation and Expenditures from the American Library Directory: 1956-83.

Part A. Circulation

(a) Year	(b) Edition	(c) Two Largest Years of Data	(d) Circulation (000,000's)	(e) Circ Index	(f) SC Circulation Index Original	(g) SC Circulation Index Corrected
1956	22	1956-55% 67% 1958-27% 22%	38.1	31.2	28.2	30.8
1960	23	1959-18% 20% 1960-73% 80%	45.3	37.1	44.3	43.3
1962	24	1962-55% 55% 1963-45% 45%	69.1	56.6	51.3	53.2
1965	25	1964-33% 40% 1965-50% 60%	78.3	64.1	61.7	61.0
1967	26	1966-33% 33% 1967-67% 67%	81.5	66.7	64.5	64.2
1969	27	1968-25% 27% 1969-67% 73%	91.4	74.9	73.2	72.1
1971	28	1970-33% 40% 1971-50% 60%	97.1	79.5	76.7	76.4
1972	29	1972-50% 67% 1973-25% 33%	95.5	78.2	75.4	76.4
1976	30	1975-25% 37% 1976-42% 63%	100.9	82.6	88.4	87.2
1977	31	1976-42% 46% 1977-50% 54%	111.6	91.4	90.4	89.5
1978	32	1977-25% 30% 1978-58% 70%	111.2	91.1	91.6	91.2
1979	33	1978-25% 1979-50% 67% 1980-25% 33%	114.8	94.0	95.7	97.1
1980	34	1979-25% 1980-50% 67% 1981-25% 33%	122.1	100.0	100.0	101.3
1981	35	1981-33% 50% 1982-33% 50%	126.0	103.2	103.9	108.7
1982	36	1981-33% 50% 1982-33% 50% 1983-33%	129.6	106.1	113.5	108.7
1983	37	1982-50% 50% 1983-50% 50%	143.2	117.3	122.0	117.7

Table 11, p. 2.

Part B. Expenditures

(a) Year	(b) Edition	(c) Two Largest Years of Data		(d) Expenditures (000's)	(e) Expends. Index	(f) SC Circulation Index Original	(g) SC Circulation Index Corrected
1956	22	1956-55%	67%	$ 11,659.1	4.6	4.0	4.4
		1958-27%	33%				
1960	23	1959-18%	20%	18,521,8	7.3	6.8	6.6
		1960-73%	80%				
1962	24	1962-55%	55%	23,268.9	9.2	8.6	9.0
		1963-45%	45%				
1965	25	1964-33%	40%	28,544.2	11.3	11.8	11.3
		1965-50%	60%				
1967	26	1966-33%	33%	42,710.2	16.9	16.2	15.4
		1967-67%	67%				
1969	27	1968-25%	27%	52,791.4	20.9	20.4	19.9
		1969-67%	73%				
1971	28	1970-33%	40%	67,483.1	26.8	27.8	26.5
		1971-50%	60%				
1972	29	1972-50%	67%	85,101.1	33.7	35.0	35.0
		1973-25%	33%				
1976	30	1975-25%	37%	118,616.7	47.0	61.7	58.1
		1976-42%	63%				
1977	31	1976-42%	46%	161,799.0	64.1	68.6	65.4
		1977-50%	54%				
1978	32	1977-25%	30%	195,240.1	77.4	78.3	75.4
		1978-58%	70%				
1979	33	1978-25%		214,226.6	84.9	86.6	91.0
		1979-50%	67%				
		1980-25%	33%				
1980	34	1979-25%		252,267.2	100.0	100.0	105.3
		1980-50%	67%				
		1981-25%	33%				
1981	35	1981-33%	50%	282,935.3	112.2	116.1	126.0
		1982-33%	50%				
1982	36	1981-33%	50%				
		1982-33%	50%	322,977.9	128.0	135.9	126.0
		1983-33%					
1983	37	1982-50%	50%				
		1983-50%	50%	369,255.9	146.4	160.2	148.1

Table 11, p. 3.

Notes:

Column a: This is the year for which we have the largest number of reports for each edition.

Column c: The provincial library agencies' reports were of different years. In this column for each edition of ALD we show the two years which had the largest number of reports and in each case the percentage of all reports for that edition, and we then convert those percentages to total 100%.

Column f: Statistics Canada Circulation Index values are from Table 9, column c. The average difference between columns e and f is 2.9 for Part A and 2.2 for Part B.

Column g: The values in column f are here "corrected" to reflect the figures in column c. Thus for edition 22 of ALD, 67% of all reports from the two years with the largest numbers of reports were for 1956, and 33% for 1958; adding 18.89 (28.2 x .67) and 11.95 (36.2 x .33) from column c of Table 6 gives 30.8 as the 1956 corrected circulation index. The average difference between columns e and g is 2.6 for Part A and 2.4 for Part B.

Table 12. Cost of Living Index for Canada: 1939-1983.

(a) Year	(b) 1949 =100	(c) 1971 =100	(d) 1981 =100	(e) 1980 =100
1939	63.2	36.7	15.5	17.4
1940	65.7	38.1	16.1	18.1
1941	69.6	40.4	17.0	19.1
1942	72.9	42.3	17.8	20.0
1943	74.2	43.1	18.2	20.5
1944	74.6	43.3	18.3	20.6
1945	75.0	43.5	18.3	20.6
1946	77.5	45.0	19.0	21.4
1947	84.8	49.2	20.8	23.4
1948	97.0	56.3	23.7	26.7
1949	100.0	58.0	24.5	27.6
1950	102.9	59.7	25.2	28.3
1951	113.7	66.0	27.8	31.3
1952	116.5	67.6	28.5	32.1
1953	115.5	67.0	28.3	31.8
1954	116.2	67.4	28.4	31.9
1955	116.4	67.5	28.5	32.1
1956	118.1	68.5	28.9	32.5
1957	121.9	70.7	29.8	33.5
1958	125.1	72.6	30.6	34.4
1959	126.5	73.4	31.0	34.9
1960	128.0	74.3	31.3	35.2
1961	129.2	75.0	31.6	35.5
1962	130.7	75.8	32.0	36.0
1963	133.0	77.2	32.6	36.7
1964	135.4	78.6	33.2	37.3
1965	138.7	80.5	34.0	38.2
1966	143.9	83.5	35.2	39.6
1967		86.5	36.5	41.1
1968		90.0	38.0	42.7
1969		94.1	39.7	44.7
1970		97.2	41.0	46.1
1971		100.0	42.2	47.5
1972		(104.8)	44.2	49.7
1973			47.6	53.5

Table 12, p. 2.

(a) Year	(b) 1949 =100	(c) 1971 =100	(d) 1981 =100	(e) 1980 =100
1974			52.8	59.4
1975			58.5	65.8
1976			62.9	70.8
1977			67.9	76.4
1978			73.9	83.1
1979			80.7	90.8
1980			88.9	100.0
1981			100.0	112.5
1982			110.8	124.6
1983			117.2	131.8

Notes:

Column b sources are Canada Year Book: 1965, p. 898, and Statistics Canada, Prices and Price Indexes 45 (April 1967) p. 21.

Column c source is Canada Year Book: 1978-79, p. 864. Since values for 1966 were given in both series, we linked the two series by use of the formula 143.9:83.5=138.7:x, and 143.9x=11,581.45, and x=80.5 (for 1965), etc.

Column d sources are Canada Year Book: 1978-79, p. 864 and Statistics Canada, Consumer Prices and Price Indexes 9 (July-September 1983) p. 24. Since values for 1972 were given in both series, we linked the two series by use of the formula 104.8:44.2=100:x, and 104.8x=4420, and x=42.2 (for 1971), etc.

Column e consists of the data in column d with the base (100) changed from 1981 to 1980.

Table 13. Measures Comparing Specified Sets of Data.

(a) The Two Series	(b) Pearson r	(c) 95% CI	(d) Annual Average Difference	(e) No. of Years
Part A. U.S. Data.				
1. U.S. public library circulation (Table 2/column c) and U.S. employment (Table 2/column i)	.95	.91-.97	--	45
2. Index values for U.S. public library circulation (1/b) and U.S. employment (2/j)	.93	.87-.96	8.9	45
3. U.S. public library circulation (2/c) and U.S. unemployment (2/k)	.62	.39-.78	--	45
4. Index values for U.S. public library circulation (1/b) and U.S. unemployment (2/ℓ)	.65	.44-.79	23.1	45
5. U.S. public library circulation from ALD (2/d) and estimated from the Index of American Public Library Circulation (2/c)	.96	.91-98	--	25
6. Index values for U.S. public library circulation from ALD (4/e) and from the Index of American Public Library Circulation (1/b)	.98	.95-.99	2.1	25
7. U.S. public library expenditures from ALD (3/d) and estimated from the Index of American Public Library Expenditures (3/c)	.99	.98-.99	--	26
8. Index values for U.S. public library expenditures from ALD (4/B/e) and for U.S. public library expenditures (1/d)	.99	.98-.99	7.3	26
9. U.S. public library expenditures estimated from the Index of American Public Library Expenditures (3/c) and reported by the U.S. Census Bureau (3/j)	.99	.98-.99	--	31
10. Index values for U.S. public library expenditures (1/d) and for U.S. Census Bureau data (3/k)	.99	.98-.99	1.6	31
11. U.S. public library expenditures from ALD (3/d) and from the U.S. Census Bureau (3/j)	.99	.98-.99	--	25
12. Index values for U.S. public library expenditures from ALD (4/B/e) and from the U.S. Census Bureau (3/k)	.99	.98-.99	6.9	25
13. U.S. public library expenditures (3/c) and U.S. employment (2/i)	.96	.92-.98	--	36

Table 13, p. 2.

(a) The Two Series	(b) Pearson r	(c) 95% CI	(d) Annual Average Difference	(e) No. of Years
14. Index values for U.S. public library expenditures (1/d) and for U.S. employment (2/j)	.96	.92-.98	38.0	36
15. Index values for U.S. public library expenditures deflated (1/g) and for U.S. employment (2/j)	.95	.90-.98	15.1	36
16. U.S. public library expenditures (3/c) and U.S. unemployment (2/k)	.79	.62-.89	--	36
17. Index values for U.S. public library expenditures (1/d) and for U.S. unemployment (2/ℓ)	.79	.62-.89	22.1	36
18. Index values for U.S. public library expenditures deflated (1/g) and for U.S. unemployment (2/ℓ)	.60	.33-.78	19.6	36
Part B. England and Wales Data.				
19. England and Wales public library circulation (Table 6/column b) and England and Wales employment (Table 6/column g)	.62	.29-.82	--	25
20. Index values for E and W public library circulation (6/c) and E and W employment (6/h)	.62	.29-.82	20.7	25
21. E and W public library circulation (6/b) and E and W unemployment (6/i)	.68	.38-.85	--	25
22. Index values for E and W public library circulation (6/c) and E and W unemployment (6/j)	.68	.38-.85	39.5	25
23. E and W public library expenditures (7/b) and E and W employment (6/g)	.21	-.13-.51	--	36
24. Index values for E and W public library expenditures (7/d) and E and W employment (6/h)	.21	-.13-.51	69.0	36
25. Index values for E and W library expenditures deflated (7/f) and E and W employment (6/h)	.48	.17-.70	36.0	36
26. E and W public library expenditures (7/b) and E and W unemployment (6/i)	.92	.89-.94	--	36
27. Index values for E and W public library expenditures (7/d) and E and W unemployment (6/j)	.92	.89-.94	20.0	36

Table 13, p. 3.

(a) The Two Series	(b) Pearson r	(c) 95% CI	(d) Annual Average Difference	(e) No. of Years
28. Index values for E and W public library expenditures deflated (7/f) and E and W unemployment (6/j)	.67	.43-.82	29.0	36
Part C. Canadian Data.				
29. Canadian public library circulation (Table 9/column b) and Canadian employment (Table 9/column i)	.98	.96-.99	--	35
30. Index values for Canadian public library circulation (9/c) and Canadian employment (9/k)	.98	.96-.99	10.6	35
31. Canadian public library circulation (9/b) and Canadian unemployment (9/j)	.86	.73-.93	--	35
32. Index values for Canadian public library circulation (9/c) and Canadian unemployment (9/ℓ)	.86	.73-.93	12.9	35
33. Canadian public library circulation (9/b) and compiled from ALD (9/f)	.99	.96-.99	--	15
34. Index values for Canadian public library circulation (9/c) and compiled from ALD (9/g)	.99	.97-.99	3.0	15
35. Canadian public library expenditures (10/b) and compiled from ALD (10/f)	.99	.97-.99	--	15
36. Index values for Canadian public library expenditures (10/d) and compiled from ALD (10/g)	.99	.97-.99	2.6	15
37. Canadian public library expenditures (10/b) and Canadian employment (9/i)	.90	.81-.95	--	35
38. Index values for Canadian public library expenditures (10/d) and Canadian employment (9/k)	.91	.82-.95	41.1	35
39. Index values for Canadian public library expenditures deflated (10/i) and Canadian employment (9/k)	.99	.98-.99	25.5	35
40. Canadian public library expenditures (10/b) and Canadian unemployment (9/j)	.92	.84-.96	--	35
41. Index values for Canadian public library expenditures (10/d) and Canadian unemployment (9/ℓ)	.92	.84-.96	24.6	35
42. Index values for Canadian public library expenditures deflated (10/i) and Canadian unemployment (9/ℓ)	.91	.81-.95	12.1	35

Table 13, p. 4.

(a) The Two Series	(b) Pearson r	(c) 95% CI	(d) Annual Average Difference	(e) No. of Years
Part D. International Comparisons.				
43. U.S. public library circulation (Table 2/column c) and England and Wales public library circulation (Table 6/column b)	.97	.93-.99	--	25
44. Index values for U.S. public library circulation (1/b) and E and W public library circulation (6/c)	.97	.93-.99	6.5	25
45. U.S. public library expenditures (3/c) and E and W public library expenditures (7/b)	.98	.96-.99	--	33
46. Index values for U.S. public library expenditures (1/d) and E and W public library expenditures (7/d)	.98	.96-.99	10.2	33
47. Index values for U.S. public library expenditures deflated (1/g) and E and W public library expenditures deflated (7/f)	.99	.98-.99	5.1	33
48. U.S. public library circulation (2/c) and Canadian public library circulation (9/b)	.99	.98-.99	--	35
49. Index values for U.S. public library circulation (1/b) and Canadian public library circulation (9/c)	.98	.96-.99	18.7	35
50. U.S. public library expenditures (3/c) and Canadian public library expenditures (10/b)	.98	.96-.99	--	31
51. Index values for U.S. public library expenditures (1/d) and Canadian public library expenditures (10/d)	.99	.98-.99	10.4	31
52. Index values for U.S. public library expenditures deflated (1/g) and Canadian public library expenditures deflated (10/i)	.94	.88-.97	23.7	31
53. E and W public library circulation (6/b) and Canadian public library circulation (9/b)	.96	.90-.98	--	19
54. Index values for E and W public library circulation (6/c) and Canadian public library circulation (9/c)	.96	.90-.98	21.1	19

Table 13, p. 5.

(a) The Two Series	(b) Pearson r	(c) 95% CI	(d) Annual Average Difference	(e) No. of Years
55. E and W public library expenditures (7/b) and Canadian public library expenditures (10/b)	.99	.98-.99	--	30
56. Index values for E and W public library expenditures (7/d) and Canadian public library expenditures (10/d)	.99	.98-.99	2.1	30
57. Index values for E and W public library expenditures deflated (7/f) and Canadian public library expenditures deflated (10/i)	.98	.96-.99	18.4	30

Notes:

Column c. The 95% confidence interval was found by using the formulas $z \pm 2o_{\bar{z}}$ and $o_{\bar{z}} = 1 \div \sqrt{N-3}$, from Hubert M. Blalock, Jr., Social Statistics (2d ed; McGraw-Hill, 1972) p. 400-03.

Columns d and e. The annual average difference is that between the index values of the two series of data, without regard to sign.

Each numbered row names the two series which have been compared, and shows in parentheses the table number and column from which each series was drawn.

"Part B. England and Wales Data." Some data in this part are for Great Britain and some for the United Kingdom but none are for less than England and Wales.